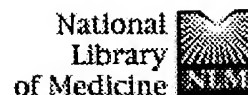


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
















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

















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
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
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
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
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
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


















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
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
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
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
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











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

















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


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
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
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
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
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
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
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
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


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


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
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
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
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
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
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
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
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
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
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








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
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
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
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
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
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
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
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
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
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
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
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

















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









































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
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
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
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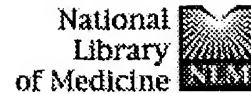
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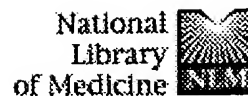
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☐ 5: [Gabellini D, Green MR, Tupler R](#) Related Articles, Links

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☐ 6: [Calado RT, Falcao RP, Garcia AB, Gabellini SM, Zago MA, Franco RF](#) Related Articles, Links

Influence of functional MDR1 gene polymorphisms on P-glycoprotein activity in CD34⁺ hematopoietic stem cells.
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☐ 7: [Targa L, Conti G, Gabellini A, Bergamo S, Rossetto A, Corbara F](#) Related Articles, Links

[Carcinoid heart disease and primary ovarian tumor]
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 PMID: 12025391 [PubMed - indexed for MEDLINE]

☐ 8: [Franco RF, Simoes BP, Tone LG, Gabellini SM, Zago MA, Falcao RP](#) Related Articles, Links

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Br J Haematol. 2001 Dec;115(3):616-8.
PMID: 11736945 [PubMed - indexed for MEDLINE]


 **9:** [Anelli PL](#), [Lattuada L](#), [Gabellini M](#), [Recanati P](#).

[Related Articles](#), [Links](#)



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Bioconjug Chem. 2001 Nov-Dec;12(6):1081-4.
PMID: 11716703 [PubMed - indexed for MEDLINE]

 **10:** [Ihmels H](#), [Faulhaber K](#), [Sturm C](#), [Bringmann G](#), [Messer K](#),
[Gabellini N](#), [Vedaldi D](#), [Viola G](#).

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Acridizinium salts as a novel class of DNA-binding and site-selective DNA-photodamaging chromophores.

Photochem Photobiol. 2001 Oct;74(4):505-11.
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AN 1997:43605 ADISCTI
DN 800540795
TI Positive inotropic effect of the novel Na⁺ -channel modulator BDF 9198 on
human non-failing and failing myocardium.
ADIS TITLE: BDF 9148 vs BDF 9198: pharmacodynamics.
Positive inotropic effects
In vitro study.
AU Muller Ehmsen J; Frank K; Brixius K; Schwinger R H G.
CS Klinik III fur Innere Medizin der Universitat zu Koln, Germany.
SO 2nd International Meeting of the Working Group on Heart Failure (May 24,
1997), pp. 78
DT Study
RE Heart Failure
FS Summary
LA English
WC 242

L4 ANSWER 2 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:400914 BIOSIS
DN PREV200300400914
TI ***Human*** genes for K⁺-dependent Na/Ca-exchangers, NCKX1, NCKX2 and
NCKX3; genomic structure, comparative analysis of promoter regions and
expression patterns.
AU Reigo, A. [Reprint Author]; Metspalu, A. [Reprint Author]
CS Tartu University Institute of Molecular and Cell Biology, Tartu, Estonia
3pusa2susa@hotmail.ee; 3pusa2susa@hotmail.ee
SO European Journal of Human Genetics, (2001) Vol. 9, No. Supplement 1, pp.
P0756. print.
Meeting Info.: 10th International Congress of Human Genetics. Vienna,
Austria. May 15-19, 2001. International Federation of Human Genetics
Societies.
ISSN: 1018-4813.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Sep 2003
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L4 ANSWER 3 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

DN PREV200200288134
 TI Changes in sarcolemmal Ca entry and sarcoplasmic reticulum (SR) Ca content in isolated ventricular myocytes from patients with end-stage heart failure following left ventricular assist device support.
 AU Terracciano, Cesare Mn. [Reprint author]; Koban, Maren [Reprint author]; Harding, Sian E. [Reprint author]; Tansley, Patrick [Reprint author]; Birks, Emma J. [Reprint author]; Yacoub, Magdi H. [Reprint author]
 CS Imperial Coll Sch of Med, London, UK
 SO Circulation, (October 23, 2001) Vol. 104, No. 17 Supplement, pp. II.480-II.481. print.
 Meeting Info.: Scientific Sessions 2001 of the American Heart Association. Anaheim, California, USA. November 11-14, 2001. American Heart Association.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 15 May 2002
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L4 ANSWER 4 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2002:263668 BIOSIS
 DN PREV200200263668
 TI Calcium influx via INCX is favored in failing ***human*** ventricular myocytes.
 AU Weber, Christopher R. [Reprint author]; Piacentino, Valentino; Margulies, Kenneth B.; Bers, Donald M.; Houser, Steven R.
 CS Loyola Univ, Maywood, IL, USA
 SO Circulation, (October 23, 2001) Vol. 104, No. 17 Supplement, pp. II.132. print.
 Meeting Info.: Scientific Sessions 2001 of the American Heart Association. Anaheim, California, USA. November 11-14, 2001. American Heart Association.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
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 LA English
 ED Entered STN: 1 May 2002
 Last Updated on STN: 1 May 2002

L4 ANSWER 5 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2002:263284 BIOSIS
 DN PREV200200263284
 TI Annexin VI and the Na/Ca exchanger are residents of caveolae microdomains in the ***human*** heart.
 AU Matteo, Rosalia G. [Reprint author]; Moravec, Christine S. [Reprint author]
 CS Cleveland Clin Fdn, Cleveland, OH, USA
 SO Circulation, (October 23, 2001) Vol. 104, No. 17 Supplement, pp. II.51. print.
 Meeting Info.: Scientific Sessions 2001 of the American Heart Association. Anaheim, California, USA. November 11-14, 2001. American Heart Association.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
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 LA English
 ED Entered STN: 1 May 2002
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L4 ANSWER 6 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2002:145004 BIOSIS
 DN PREV200200145004
 TI Very low dose of the Na⁺/Ca²⁺ exchange inhibitor, KB-R7943, protects ischemic reperfused aged Fischer 344 rat hearts: Considerable strain difference in the sensitivity to KB-R7943.
 AU Yamamura, Ken [Reprint author]; Tani, Masato; Hasegawa, Hiroshi; Gen, Wen
 CS Department of Geriatrics, Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo, 160-8582, Japan
 yamamura@sc.itc.keio.ac.jp
 SO Cardiovascular Research, (December, 2001) Vol. 52, No. 3, pp. 397-406. print.
 CODEN: CVREAU. ISSN: 0008-6363.
 DT Article
 LA English

Last Updated on STN: 26 Feb 2002

L4 ANSWER 7 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:71595 BIOSIS
DN PREV200200071595
TI Novel inhibitors of the ***sodium*** - ***calcium***
exchanger : Benzene ring analogues of N-guanidino substituted
amiloride derivatives.
AU Rogister, Francoise; Laeckmann, Didier; Plasman, Pierre-Olivier; Van
Eylen, Francoise; Ghyoot, Marianne; Maggetto, Carine; Liegeois,
Jean-Francois; Geczy, Joseph; Herchuelz, Andre; Delarge, Jacques;
Masereel, Bernard [Reprint author]
CS Department of Pharmacy, University of Namur, 61 Rue de Bruxelles, B-5000,
Namur, Belgium
bernard.masereel@fundp.ac.be
SO European Journal of Medicinal Chemistry, (July-August, 2001) Vol. 36, No.
7-8, pp. 597-614. print.
CODEN: EJMCA5. ISSN: 0223-5234.
DT Article
LA English
ED Entered STN: 16 Jan 2002
Last Updated on STN: 25 Feb 2002

L4 ANSWER 8 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:69723 BIOSIS
DN PREV200200069723
TI Chronic atrial fibrillation in ***humans*** is associated with reduced
SERCA2a expression and depressed force-frequency response.
AU Schmidt-Schweda, S. H. [Reprint author]; Schaller, C. [Reprint author];
Pieske, B. [Reprint author]
CS Kardiologie und Pneumologie, Universitaet Goettingen, Goettingen, Germany
SO European Heart Journal, (September, 2001) Vol. 22, No. Abstract
Supplement, pp. 37. print.
Meeting Info.: XXIII Congress of the European Society of Cardiology
together with the 36th Annual General Meeting of the Association for
European Paediatric Cardiology. Stockholm, Sweden. September 01-05, 2001.
CODEN: EHJODF. ISSN: 0195-668X.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 16 Jan 2002
Last Updated on STN: 25 Feb 2002

L4 ANSWER 9 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:558807 BIOSIS
DN PREV200100558807
TI Genome search for QTL controlling pulse pressure: A practical application
of the unified Haseman-Elston algorithm.
AU Li, J. [Reprint author]; Niu, T. [Reprint author]; Rogus, J.; Yang, J.;
Schork, N. [Reprint author]; Fang, Z.; Xu, X. [Reprint author]
CS Prog Population Genetics, Harvard Sch Public Health, Boston, MA, USA
SO American Journal of Human Genetics, (October, 2001) Vol. 69, No. 4
Supplement, pp. 510. print.
Meeting Info.: 51st Annual Meeting of the American Society of Human
Genetics. San Diego, California, USA. October 12-16, 2001.
CODEN: AJHGAG. ISSN: 0002-9297.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 Dec 2001
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L4 ANSWER 10 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:552622 BIOSIS
DN PREV200100552622
TI Gender influences (Ca²⁺)_i during metabolic inhibition in myocytes
overexpressing the Na⁺-Ca²⁺ exchanger.
AU Sugishita, Kazuro; Su, Zhi; Li, Fenghua; Philipson, Kenneth D.; Barry,
William H. [Reprint author]
CS Division of Cardiology, University of Utah Health Sciences Center, 50 N
Medical Dr, Salt Lake City, UT, 84132, USA
whbarry@med.utah.edu
SO Circulation, (October 23, 2001) Vol. 104, No. 17, pp. 2101-2106. print.
CODEN: CIRCAZ. ISSN: 0009-7322.

LA English
 ED Entered STN: 21 Nov 2001
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L4 ANSWER 11 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:441286 BIOSIS
 DN PREV200100441286
 TI A new Na/Ca exchanger splicing pattern identified in situ leads to a functionally active 70 kDa NH2-terminal protein.
 AU Van Eylen, F.; Kamagate, A.; Herchuelz, A. [Reprint author]
 CS Laboratoire de Pharmacodynamie et de Therapeutique, Faculte de Medecine, Universite Libre de Bruxelles, Route de Lennik, 808, Batiment GE, B-1070, Bruxelles, Belgium
 herchu@ulb.ac.be
 SO Cell Calcium, (September, 2001) Vol. 30, No. 3, pp. 191-198. print.
 CODEN: CECADV. ISSN: 0143-4160.
 DT Article
 LA English
 ED Entered STN: 19 Sep 2001
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L4 ANSWER 12 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:384901 BIOSIS
 DN PREV200100384901
 TI Molecular cloning of a third member of the potassium-dependent ***sodium*** - ***calcium*** ***exchanger*** gene family, NCKX3.
 AU Kraev, Alexander; Quednau, Beate D.; Leach, Stephen; Li, Xiao-Fang; Dong, Hui; Winkfein, Robert; Perizzolo, Marco; Cai, Xinjiang; Yang, RuoMei; Philipson, Kenneth D.; Lytton, Jonathan [Reprint author]
 CS University of Calgary Health Sciences Center, 3330 Hospital Dr. NW, Calgary, AB, T2N 4N1, Canada
 jlytton@ucalgary.ca
 SO Journal of Biological Chemistry, (June 22, 2001) Vol. 276, No. 25, pp. 23161-23172. print.
 CODEN: JBCHA3. ISSN: 0021-9258.
 DT Article
 LA English
 OS Genbank-AF169257; Genbank-AF288087; Genbank-AF314821; Genbank-AF314822; Genbank-AY009158
 ED Entered STN: 15 Aug 2001
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L4 ANSWER 13 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:358275 BIOSIS
 DN PREV200100358275
 TI ***Sodium*** - ***calcium*** ***exchanger*** (NCX-1) and calcium modulation: NCX protein expression patterns and regulation of early heart development.
 AU Linask, Kersti K. [Reprint author]; Han, Ming-Da; Artman, Michael; Ludwig, Cheryl A.
 CS Dept. of Cell Biology, UMDNJ-SOM, 2 Medical Center Drive, Stratford, NJ, 08084, USA
 linaskkk@umdnj.edu
 SO Developmental Dynamics, (July, 2001) Vol. 221, No. 3, pp. 249-264. print.
 CODEN: DEDYEI. ISSN: 1058-8388.
 DT Article
 LA English
 ED Entered STN: 2 Aug 2001
 Last Updated on STN: 19 Feb 2002

L4 ANSWER 14 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:301835 BIOSIS
 DN PREV200100301835
 TI Region specific regulation of sodium pump isoform and Na,Ca-exchanger expression in the failing ***human*** heart: Right atrium vs left ventricle.
 AU Mueller-Ehmsen, Jochen; Wang, Jiangnan; Schwinger, Robert H. G.; McDonough, Alicia A. [Reprint author]
 CS Department of Physiology and Biophysics, University of Southern California Keck School of Medicine, 1333 San Pablo Street, Los Angeles, CA, 90033, USA
 mcdonoug@hsc.usc.edu
 SO Cellular and Molecular Biology (Noisy-Le-Grand), (March, 2001) Vol. 47, No. 2, pp. 373-381. print.
 CODEN: CMBID4. ISSN: 0145-5680.

LA English
 ED Entered STN: 27 Jun 2001
 Last Updated on STN: 19 Feb 2002

L4 ANSWER 15 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:299602 BIOSIS
 DN PREV200100299602
 TI Targeted inactivation of the ***sodium*** - ***calcium***
 exchanger (Ncx1) results in the lack of a heartbeat and abnormal
 myofibrillar organization.
 AU Conway, Simon J. [Reprint author]; Koushik, Srinagesh [Reprint author];
 Wang, Jian [Reprint author]; Rogers, Rhonda [Reprint author]; Creazzo,
 Tony [Reprint author]
 CS Medical College of Georgia, 1120 15th Street, Augusta, GA, 30912, USA
 SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A377. print.
 Meeting Info.: Annual Meeting of the Federation of American Societies for
 Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA.
 March 31-April 04, 2001.
 CODEN: FAJOEC. ISSN: 0892-6638.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 20 Jun 2001
 Last Updated on STN: 19 Feb 2002

L4 ANSWER 16 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:290988 BIOSIS
 DN PREV200100290988
 TI Stoichiometry of the retinal cone Na/Ca-K exchanger heterologously
 expressed in insect cells: Comparison with the bovine heart Na/Ca
 exchanger.
 AU Szerencsei, Robert T.; Prinsen, Clemens F. M.; Schnetkamp, Paul P. M.
 [Reprint author]
 CS Department of Physiology and Biophysics, Faculty of Medicine, University
 of Calgary, 3330 Hospital Dr., NW, Calgary, AB, T2N 4N1, Canada
 pschnetk@ucalgary.ca
 SO Biochemistry, (May 22, 2001) Vol. 40, No. 20, pp. 6009-6015. print.
 CODEN: BICHAW. ISSN: 0006-2960.
 DT Article
 LA English
 ED Entered STN: 20 Jun 2001
 Last Updated on STN: 19 Feb 2002

L4 ANSWER 17 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:242468 BIOSIS
 DN PREV200100242468
 TI Overexpression of the Na/Ca exchanger and reduced SERCa function.
 AU Terracciano, Cesare M. N. [Reprint author]; MacLeod, Kenneth T.
 CS Department of Cardiac Medicine, National Heart and Lung Institute,
 Imperial College, Dovehouse Street, London, SW3 6LY, UK
 SO Cardiovascular Research, (April, 2001) Vol. 50, No. 1, pp. 167-169. print.
 CODEN: CVREAU. ISSN: 0008-6363.
 DT Letter
 LA English
 ED Entered STN: 16 May 2001
 Last Updated on STN: 19 Feb 2002

L4 ANSWER 18 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:189134 BIOSIS
 DN PREV200100189134
 TI NCX1 Na/Ca exchanger splice variants in pancreatic islet cells.
 AU Van Eylen, F.; Bollen, A.; Herchuelz, A. [Reprint author]
 CS Laboratoire de Pharmacodynamie et de Therapeutique, Faculte de Medecine,
 Universite Libre de Bruxelles, Route de Lennik, 808-Batiment GE, B-1070,
 Bruxelles, Belgium
 herchu@ulb.ac.be
 SO Journal of Endocrinology, (March, 2001) Vol. 168, No. 3, pp. 517-526.
 print.
 CODEN: JOENAK. ISSN: 0022-0795.
 DT Article
 LA English
 ED Entered STN: 20 Apr 2001
 Last Updated on STN: 18 Feb 2002

L4 ANSWER 19 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

DN PREV200100172359
TI Is Na+Ca2+-exchanger-expression altered parallel to myocardial dysfunction in the endomyocardium of patients with valvular heart disease?.
Original Title: Aendert sich die Na+Ca2+-Exchanger-Expression im Endomyokard von Patienten mit chronischen Herzklappenfehlern parallel zur Stoerung der myokardialen Pumpfunktion?.

AU Piper, C. [Reprint author]; Bilger, J.; Henrichs, E.-M.; Wudel, E.; Schultheiss, H. P.; Horstkotte, D.; Doerner, A.
CS Kardiologische Klinik, Herzzentrum Nordrhein-Westfalen, Ruhr-Universitaet Bochum, Georgstr. 11, D-32545, Bad Oeynhausen, Germany
cpiper@hdz.nrw.ruhr-uni-bochum.de
SO Zeitschrift fuer Kardiologie, (August, 2000) Vol. 89, No. 8, pp. 682-690. print.
CODEN: ZKRDX. ISSN: 0300-5860.

DT Article
LA German
ED Entered STN: 4 Apr 2001
Last Updated on STN: 18 Feb 2002

L4 ANSWER 20 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:164162 BIOSIS
DN PREV200100164162
TI Activation of Na+, K+, Cl--cotransport mediates intracellular Ca2+ increase and apoptosis induced by Pinacidil in HepG2 ***human*** hepatoblastoma cells.

AU Kim, Jung-Ae; Kang, Young Shin; Lee, Yong Soo [Reprint author]
CS Department of Physiology, College of Medicine, Kwandong University, Kangnung, 210-701, South Korea
yslee@mail.kwandong.ac.kr
SO Biochemical and Biophysical Research Communications, (February 23, 2001) Vol. 281, No. 2, pp. 511-519. print.
CODEN: BBRCA9. ISSN: 0006-291X.

DT Article
LA English
ED Entered STN: 4 Apr 2001
Last Updated on STN: 15 Feb 2002

L4 ANSWER 21 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:139518 BIOSIS
DN PREV200100139518
TI Stoichiometry of the rat brain K-dependent Na/Ca exchanger, NCKX2.

AU Lytton, Jonathan [Reprint author]; Dong, Hui [Reprint author]
CS University of Calgary, Calgary, AB, T2N 4N1, Canada
SO Biophysical Journal, (January, 2001) Vol. 80, No. 1 Part 2, pp. 18a. print.
Meeting Info.: 45th Annual Meeting of the Biophysical Society. Boston, Massachusetts, USA. February 17-21, 2001. Biophysical Society.
CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 21 Mar 2001
Last Updated on STN: 15 Feb 2002

L4 ANSWER 22 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:128287 BIOSIS
DN PREV200100128287
TI Altered Ca2+ transport and signal transduction in diabetes mellitus.

AU Balasubramanyam, M. [Reprint author]; Premanand, C. [Reprint author]; Mohan, V. [Reprint author]
CS Madras Diabetes Research Foundation, Chennai, India
SO Cell Biology International, (2000) Vol. 24, No. 12, pp. 921. print.
Meeting Info.: 7th International Congress of Cell Biology. Gold Coast, Queensland, Australia. September 24-28, 2000. International Federation for Cell Biology; Australia and New Zealand Society for Cell and Developmental Biology.
ISSN: 1065-6995.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 14 Mar 2001
Last Updated on STN: 15 Feb 2002

L4 ANSWER 23 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:124102 BIOSIS

TI Hiv-1 TAT transgenically targeted to ventricular cardiac myocytes alters
mitochondrial structure as the mice age.
AU Raidel, Scott M. [Reprint author]; Haase, Chad P. [Reprint author];
Samarel, Allen M.; Lewis, William
CS Emory Univ Sch of Medicine, Atlanta, GA, USA
SO Circulation, (October 31, 2000) Vol. 102, No. 18 Supplement, pp. II.136.
print.
Meeting Info.: Abstracts from American Heart Association Scientific
Sessions 2000. New Orleans, Louisiana, USA. November 12-15, 2000. American
Heart Association.
CODEN: CIRCAZ. ISSN: 0009-7322.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 7 Mar 2001
Last Updated on STN: 15 Feb 2002

L4 ANSWER 24 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:112282 BIOSIS
DN PREV200100112282
TI Does Ca influx during the action potential plateau via reverse-mode Na/Ca
exchange slow the decay of the Ca transient of failing ***human***
myocytes?
AU Weissner, Jutta [Reprint author]; Piacentino, Valentino; Margulies, Kenneth
B.; Houser, Steven R.
CS Temple Univ Sch of Medicine, Philadelphia, PA, USA
SO Circulation, (October 31, 2000) Vol. 102, No. 18 Supplement, pp. II.295.
print.
Meeting Info.: Abstracts from American Heart Association Scientific
Sessions 2000. New Orleans, Louisiana, USA. November 12-15, 2000. American
Heart Association.
CODEN: CIRCAZ. ISSN: 0009-7322.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 28 Feb 2001
Last Updated on STN: 15 Feb 2002

L4 ANSWER 25 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:110845 BIOSIS
DN PREV200100110845
TI Pharmacological regulation of mitochondrial permeability in cultured
neuroblastoma cells.
AU Woollacott, A. J. [Reprint author]; Simpson, P. B. [Reprint author]
CS MSD, NRC, Terlings Park, Harlow, CM20 2QR, UK
SO Biochemical Society Transactions, (October, 2000) Vol. 28, No. 5, pp.
A205. print.
Meeting Info.: 18th International Congress of Biochemistry and Molecular
Biology. Birmingham, UK. July 16-20, 2000. International Union of
Biochemistry and Molecular Biology; Federation of European Biochemical
Societies; Biochemical Society.
CODEN: BCSTB5. ISSN: 0300-5127.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 28 Feb 2001
Last Updated on STN: 15 Feb 2002

L4 ANSWER 26 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:108240 BIOSIS
DN PREV200100108240
TI An orphan G-protein coupled receptor with multiple Na⁺/Ca²⁺ exchanger
calcium binding domain repeats: NCGR-1.
AU Dietrich, P. S. [Reprint author]; Wisotzky, R.; Abel, K.; Johnson, C.;
Catalano, S. M.; Ilnicka, M.; Sangameswaran, L.
CS Roche Bioscience, Palo Alto, CA, USA
SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract
No.-537.15. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New
Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 28 Feb 2001

L4 ANSWER 27 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:59764 BIOSIS
 DN PREV200100059764
 TI Gene expression analysis by transcriptional profiling in the left
 ventricle of patients pre- and post-LVAD support.
 AU Rodrigue-Way, Amelie C. [Reprint author]; Pollman, Matthew J. [Reprint
 author]; Tang, Nga K. [Reprint author]; Jeyaseelan, Raju [Reprint author];
 Rigotti, Attilio [Reprint author]; Golden, Serge [Reprint author];
 Donoghue, Mary A. [Reprint author]; Houser, Steven R.; Marks, Andrew R.;
 Burkhoff, Daniel; Breitbart, Roger E.; Acton, Susan
 CS Millennium Pharmaceuticals Inc, Cambridge, MA, USA
 SO Circulation, (October 31, 2000) Vol. 102, No. 18 Supplement, pp. II.266.
 print.
 Meeting Info.: Abstracts from American Heart Association Scientific
 Sessions 2000. New Orleans, Louisiana, USA. November 12-15, 2000. American
 Heart Association.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 31 Jan 2001
 Last Updated on STN: 12 Feb 2002

L4 ANSWER 28 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2000:534982 BIOSIS
 DN PREV200000534982
 TI ***Human*** distal nephron: Distribution of transport proteins.
 AU Lager, H. [Reprint author]; Arpin-Bott, M. P.; Loffing-Cueni, D. [Reprint
 author]; Loffing, J. [Reprint author]; Knepper, M.; Kaissling, B. [Reprint
 author]
 CS Anatomical Department, University Zurich, Zurich, Switzerland
 SO Kidney and Blood Pressure Research, (2000) Vol. 23, No. 3-5, pp. 222.
 print.
 Meeting Info.: Congress of Nephrology 2000. Vienna, Austria. September
 02-05, 2000. Gesellschaft fuer Nephrologie.
 ISSN: 1420-4096.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 13 Dec 2000
 Last Updated on STN: 11 Jan 2002

L4 ANSWER 29 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2000:519978 BIOSIS
 DN PREV200000519978
 TI Activation of Na⁺/Ca²⁺ exchanger in kinin B1 receptor-stimulated
 human fibroblast is associated with collagen production.
 AU Romero, Jose R. [Reprint author]; Ricupero, Dennis A.; Rivera, Alicia;
 Goldstein, Ronald H.; Conlin, Paul R.
 CS Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA, USA
 SO Hypertension (Baltimore), (October, 2000) Vol. 36, No. 4, pp. 720. print.
 Meeting Info.: 54th Annual Fall Conference and Scientific Sessions of the
 Council for High Blood Pressure Research. Washington, DC, USA. November
 24-27, 2000.
 CODEN: HPRTDN. ISSN: 0194-911X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 29 Nov 2000
 Last Updated on STN: 11 Jan 2002

L4 ANSWER 30 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2000:501794 BIOSIS
 DN PREV200000501794
 TI Increased Na⁺-Ca²⁺ exchanger in the failing heart.
 AU Pogwizd, Steven M. [Reprint author]
 CS Department of Medicine, Section of Cardiology, University of Illinois at
 Chicago, 840 S Wood St, Chicago, IL, 60612-7323, USA
 SO Circulation Research, (October 13, 2000) Vol. 87, No. 8, pp. 641-643.
 print.
 CODEN: CIRUAL. ISSN: 0009-7330.
 DT Article
 Editorial

ED Entered STN: 15 Nov 2000
Last Updated on STN: 11 Jan 2002

L4 ANSWER 31 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:456471 BIOSIS
DN PREV200000456471
TI Abnormalities of calcium cycling in the hypertrophied and failing heart.
AU Houser, Steven R. [Reprint author]; Piacentino, Valentino, III; Weisser, Jutta
CS Temple University School of Medicine, 3400 North Broad Street, Philadelphia, PA, 19140, USA
SO Journal of Molecular and Cellular Cardiology, (September, 2000) Vol. 32, No. 9, pp. 1595-1607. print.
CODEN: JMCDAY. ISSN: 0022-2828.
DT Article
General Review; (Literature Review)
LA English
ED Entered STN: 25 Oct 2000
Last Updated on STN: 10 Jan 2002

L4 ANSWER 32 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:403066 BIOSIS
DN PREV200000403066
TI Calcineurin controls the transcription of Na⁺/Ca²⁺ exchanger isoforms in developing cerebellar neurons.
AU Li, Lei; Guerini, Danilo; Carafoli, Ernesto [Reprint author]
CS Institute of Biochemistry, Swiss Federal Institute of Technology, 8092, Zurich, Switzerland
SO Journal of Biological Chemistry, (July 7, 2000) Vol. 275, No. 27, pp. 20903-20910. print.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
LA English
ED Entered STN: 20 Sep 2000
Last Updated on STN: 8 Jan 2002

L4 ANSWER 33 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:397751 BIOSIS
DN PREV200000397751
TI Quantitative analysis of Na⁺-Ca²⁺ exchanger expression in guinea-pig heart.
AU McDonald, Ruth L.; Colyer, John; Harrison, Simon M. [Reprint author]
CS School of Biomedical Sciences, University of Leeds, Worsley Building, Leeds, LS2 9NQ, UK
SO European Journal of Biochemistry, (August, 2000) Vol. 267, No. 16, pp. 5142-5148. print.
CODEN: EJBCAI. ISSN: 0014-2956.
DT Article
LA English
ED Entered STN: 20 Sep 2000
Last Updated on STN: 8 Jan 2002

L4 ANSWER 34 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:361429 BIOSIS
DN PREV200000361429
TI Helix packing of the cardiac ***sodium*** - ***calcium***
exchanger : Proximity of transmembrane segments 2, 3, and 7.
AU Qiu, Zhiyong [Reprint author]; Nicoll, Debora A. [Reprint author]; Philipson, Kenneth D. [Reprint author]
CS Department of Physiology, University of California at Los Angeles, Los Angeles, CA, USA
SO Journal of General Physiology, (July, 2000) Vol. 116, No. 1, pp. 17a. print.
Meeting Info.: Fifty-fourth Annual Meeting of the Society of General Physiologists. Woods Hole, Massachusetts, USA. September 07-09, 2000. Society of General Physiologists.
CODEN: JGPLAD. ISSN: 0022-1295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 23 Aug 2000
Last Updated on STN: 8 Jan 2002

L4 ANSWER 35 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

DN PREV200000263063
 TI Molecular cloning and functional expression of the potassium-dependent
 sodium - ***calcium*** ***exchanger*** from ***human***
 and chicken retinal cone photoreceptors.
 AU Prinsen, Clemens F. M.; Szerencsei, Robert T.; Schnetkamp, Paul P. M.
 [Reprint author]
 CS Faculty of Medicine, University of Calgary, 3330 Hospital Drive N.W.,
 Calgary, AB, T2N 4N1, Canada
 SO Journal of Neuroscience, (Feb. 15, 2000) Vol. 20, No. 4, pp. 1424-1434.
 print.
 CODEN: JNRSDS. ISSN: 0270-6474.
 DT Article
 LA English
 ED Entered STN: 21 Jun 2000
 Last Updated on STN: 5 Jan 2002

L4 ANSWER 36 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2000:181934 BIOSIS
 DN PREV200000181934
 TI Cardiac dysfunction occurs in the HIV-1 transgenic mouse treated with
 zidovudine.
 AU Lewis, William [Reprint author]; Grupp, Ingrid L.; Grupp, Gunter; Hoit,
 Brian; Morris, Randal; Samarel, Allen M.; Bruggeman, Leslie; Klotman, Paul
 CS Department of Pathology, Emory University School of Medicine ML 529, 1639
 Pierce Drive, 7117 Woodruff Memorial Building, Atlanta, GA, 30322, USA
 SO Laboratory Investigation, (Feb., 2000) Vol. 80, No. 2, pp. 187-197. print.
 CODEN: LAINAW. ISSN: 0023-6837.
 DT Article
 LA English
 ED Entered STN: 11 May 2000
 Last Updated on STN: 4 Jan 2002

L4 ANSWER 37 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2000:137081 BIOSIS
 DN PREV200000137081
 TI Functional characterization of a "split" Na⁺-Ca²⁺ exchanger.
 AU Ottolia, Michela [Reprint author]; Qiu, Zhiyong [Reprint author];
 Philipson, Kenneth D. [Reprint author]
 CS Dept. of Physiology, UCLA, Los Angeles, CA, USA
 SO Biophysical Journal, (Jan., 2000) Vol. 78, No. 1 Part 2, pp. 54A. print.
 Meeting Info.: 44th Annual Meeting of the Biophysical Society. New
 Orleans, Louisiana, USA. February 12-16, 2000.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 19 Apr 2000
 Last Updated on STN: 4 Jan 2002

L4 ANSWER 38 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2000:24570 BIOSIS
 DN PREV200000024570
 TI Molecular and ultrastructural features of cardiomyopathy occur in AIDS
 transgenic (TG) mice treated with zidovudine.
 AU Lewis, William [Reprint author]; Samarel, Allen M.
 CS Univ of Cincinnati Coll of Medicine, Cincinnati, OH, USA
 SO Circulation, (Nov. 2, 1999) Vol. 100, No. 18 SUPPL., pp. I.269. print.
 Meeting Info.: 72nd Scientific Sessions of the American Heart Association.
 Atlanta, Georgia, USA. November 7-10, 1999.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 29 Dec 1999
 Last Updated on STN: 31 Dec 2001

L4 ANSWER 39 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:494502 BIOSIS
 DN PREV199900494502
 TI Physiological and molecular characterization of the Na⁺/Ca²⁺ exchanger in
 human platelets.
 AU Kimura, Masayuki [Reprint author]; Jeanclos, Elisabeth M.; Donnelly,
 Robert J.; Lytton, Jonathan; Reeves, John P.; Aviv, Abraham
 CS Hypertension Research Center, Univ. of Medicine and Dentistry of New
 Jersey, 185 South Orange Ave., MSB Rm. F-464, Newark, NJ, 07103, USA

H911-H917. print.
 CODEN: AJPHAP. ISSN: 0002-9513.

DT Article
 LA English
 ED Entered STN: 16 Nov 1999
 Last Updated on STN: 16 Nov 1999

L4 ANSWER 40 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:482343 BIOSIS
 DN PREV199900482343
 TI Exposure of N-formyl-L-methionyl-L-leucyl-L-phenylalanine-activated
 human neutrophils to the Pseudomonas aeruginosa-derived pigment
 1-hydroxyphenazine is associated with impaired calcium efflux and
 potentiation of primary granule enzyme release.
 AU Ramafi, Grace; Anderson, Ronald [Reprint author]; Theron, Annette;
 Feldman, Charles; Taylor, Graham W.; Wilson, Robert; Cole, Peter J.
 CS Institute for Pathology, Pretoria, South Africa
 SO Infection and Immunity, (Oct., 1999) Vol. 67, No. 10, pp. 5157-5162.
 print.
 CODEN: INFIBR. ISSN: 0019-9567.

DT Article
 LA English
 ED Entered STN: 16 Nov 1999
 Last Updated on STN: 16 Nov 1999

L4 ANSWER 41 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:479932 BIOSIS
 DN PREV199900479932
 TI Quantitative assessment of the myocardial Na⁺/Ca²⁺ exchanger transcription
 in inflamed heart tissue.
 AU Doerner, A. [Reprint author]; Bilger, J. [Reprint author]; Piper, C.
 [Reprint author]; Henrichs, E. [Reprint author]; Kuehl, U. [Reprint
 author]; Horstkotte, D. [Reprint author]; Schultheiss, H.-P. [Reprint
 author]
 CS Department of Cardiology, Benjamin Franklin Hospital, Free University of
 Berlin, Berlin, Germany
 SO European Heart Journal, (Aug., 1999) Vol. 20, No. ABSTR. SUPPL., pp. 620.
 print.
 Meeting Info.: XXist Congress of the European Society of Cardiology.
 Barcelona, Spain. August 28-September 1, 1999. European Society of
 Cardiology.
 CODEN: EHJODF. ISSN: 0195-668X.

DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 9 Nov 1999
 Last Updated on STN: 9 Nov 1999

L4 ANSWER 42 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:479608 BIOSIS
 DN PREV199900479608
 TI Regional dependent differences in the activity of the Na⁺/Ca²⁺-exchanger
 in ***human*** non-failing myocardium.
 AU Diedrichs, H. [Reprint author]; Mueller-Ehmsen, J.; Zobel, C. [Reprint
 author]; Mc Donough, A. A.; Schwinger, R. H. G. [Reprint author]
 CS Klinik III fuer Innere Medizin der Universitaet zu Cologne, Cologne,
 Germany
 SO European Heart Journal, (Aug., 1999) Vol. 20, No. ABSTR. SUPPL., pp. 44.
 print.
 Meeting Info.: XXist Congress of the European Society of Cardiology.
 Barcelona, Spain. August 28-September 1, 1999. European Society of
 Cardiology.
 CODEN: EHJODF. ISSN: 0195-668X.

DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 9 Nov 1999
 Last Updated on STN: 9 Nov 1999

L4 ANSWER 43 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:472218 BIOSIS
 DN PREV199900472218
 TI Upregulation of the sarcolemmal Na⁺/Ca²⁺-exchanger in patients with

AU Schotten, U. [Reprint author]; van Helden, M.; Benke, D.; Stellbrink, C.;
 CS Schoendube, F.; Hanrath, P.; Allessie, M.
 SO Dept. of Cardiology, University Hospital Aachen, Aachen, Germany
 European Heart Journal, (Aug., 1999) Vol. 20, No. ABSTR. SUPPL., pp. 573.
 print.
 Meeting Info.: XXist Congress of the European Society of Cardiology.
 Barcelona, Spain. August 28-September 1, 1999. European Society of
 Cardiology.
 CODEN: EHJODF. ISSN: 0195-668X.

DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)

LA English
 ED Entered STN: 9 Nov 1999
 Last Updated on STN: 9 Nov 1999

L4 ANSWER 44 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:458986 BIOSIS
 DN PREV199900458986
 TI Elevated plasma norepinephrine levels in endstage heart failure are
 significantly correlated to upregulation of Na⁺/Ca²⁺ exchanger protein
 levels.

AU Schillinger, W. [Reprint author]; Schneider, H.; El-Armouche, A.; Ferrari,
 R.; Hasenfuss, G. [Reprint author]
 CS Kardiologie und Pneumologie, Georg-August-Universitaet Goettingen,
 Goettingen, Germany
 SO European Heart Journal, (Aug., 1999) Vol. 20, No. ABSTR. SUPPL., pp. 323.
 print.
 Meeting Info.: XXist Congress of the European Society of Cardiology.
 Barcelona, Spain. August 28-September 1, 1999. European Society of
 Cardiology.
 CODEN: EHJODF. ISSN: 0195-668X.

DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)

LA English
 ED Entered STN: 1 Nov 1999
 Last Updated on STN: 3 May 2000

L4 ANSWER 45 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:442974 BIOSIS
 DN PREV199900442974
 TI Truncation of the C terminus of the rat brain Na⁺-Ca²⁺ exchanger RBE-1
 (NCX1.4) impairs surface expression of the protein.

AU Kasir, Judith; Ren, Xiaoyan; Furman, Ian; Rahamimoff, Hannah [Reprint
 author]
 CS Department of Biochemistry, Hebrew University Hadassah Medical School
 Jerusalem, 91120, Jerusalem, Israel
 SO Journal of Biological Chemistry, (Aug. 27, 1999) Vol. 274, No. 35, pp.
 24873-24880. print.
 CODEN: JBCHA3. ISSN: 0021-9258.

DT Article
 LA English
 ED Entered STN: 26 Oct 1999
 Last Updated on STN: 26 Oct 1999

L4 ANSWER 46 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:428012 BIOSIS
 DN PREV199900428012
 TI Sodium/calcium exchange contributes to contraction and relaxation in
 failed ***human*** ventricular myocytes.

AU Gaughan, John P. [Reprint author]; Furukawa, Satoshi [Reprint author];
 Jeevanandam, Valluvan [Reprint author]; Hefner, Colleen A. [Reprint
 author]; Kubo, Hajime [Reprint author]; Margulies, Kenneth B. [Reprint
 author]; McGowan, Brian S. [Reprint author]; Mattiello, Julian A. [Reprint
 author]; Dipia, Konstantina [Reprint author]; Piacentino, Valentino, III
 [Reprint author]; Li, Siyun [Reprint author]; Houser, Steven R. [Reprint
 author]
 CS Departments of Physiology and Cardio-Thoracic Surgery, Temple University
 School of Medicine, Philadelphia, PA, 19140, USA
 SO American Journal of Physiology, (Aug., 1999) Vol. 277, No. 2 PART 2, pp.
 H714-H724. print.
 CODEN: AJPHAP. ISSN: 0002-9513.

DT Article
 LA English

Last Updated on STN: 18 Oct 1999

L4 ANSWER 47 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:406435 BIOSIS
DN PREV199900406435
TI Changes in Ca²⁺ transport proteins in ***human*** atrial fibrillation.
AU Schotten, Ulrich [Reprint author]; Stellbrink, Christoph; Hanrath, Peter;
Allessie, Maurits
CS University Hospital Aachen, Aachen, Germany
SO Journal of Molecular and Cellular Cardiology, (June, 1999) Vol. 31, No. 6,
pp. A63. print.
Meeting Info.: Abstracts of the XXth Meeting of the International Society
for Heart Research, European Section. Maastricht, The Netherlands. June
20-30, 1999.
CODEN: JMCDAJ. ISSN: 0022-2828.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 8 Oct 1999
Last Updated on STN: 8 Oct 1999

L4 ANSWER 48 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:376958 BIOSIS
DN PREV199900376958
TI Ni²⁺ transport by the ***human*** Na⁺/Ca²⁺ exchanger expressed in Sf9
cells.
AU Egger, M.; Ruknudin, A.; Niggli, E.; Lederer, W. J.; Schulze, D. H.
[Reprint author]
CS Dept. of Microbiology and Immunology, University of Maryland, 655 W.
Baltimore St., Baltimore, MD, 21201, USA
SO American Journal of Physiology, (May, 1999) Vol. 276, No. 5 PART 1, pp.
C1184-C1192. print.
CODEN: AJPHAP. ISSN: 0002-9513.
DT Article
LA English
ED Entered STN: 13 Sep 1999
Last Updated on STN: 13 Sep 1999

L4 ANSWER 49 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:305800 BIOSIS
DN PREV199900305800
TI C-terminal fragment of Alzheimer's amyloid precursor protein inhibits
sodium / ***calcium*** ***exchanger*** activity in SK-N-SH
cell.
AU Kim, Hye-Sun; Lee, Jun-Ho; Suh, Yoo-Hun [Reprint author]
CS Department of Pharmacology, College of Medicine and Department of
Molecular Pharmacology, Neuroscience Research Institute, Seoul National
University, Seoul, 150-747, South Korea
SO Neuroreport, (Jan. 18, 1999) Vol. 10, No. 1, pp. 113-116. print.
CODEN: NERPEZ. ISSN: 0959-4965.
DT Article
LA English
ED Entered STN: 12 Aug 1999
Last Updated on STN: 12 Aug 1999

L4 ANSWER 50 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:302785 BIOSIS
DN PREV199900302785
TI Gene expression of proteins influencing the calcium homeostasis in
patients with persistent and paroxysmal atrial fibrillation.
AU Brundel, Bianca J. J. M.; Van Gelder, Isabelle C. [Reprint author];
Henning, Robert H.; Tuinenburg, Anton E.; Deelman, Leo E.; Tieleman,
Robert G.; Grandjean, Jan G.; Van Gilst, Wiek H.; Crijns, Harry J. G. M.
CS Department of Cardiology, Thoraxcenter, University Hospital Groningen,
9700 RB, Groningen, Netherlands
SO Cardiovascular Research, (May, 1999) Vol. 42, No. 2, pp. 443-454. print.
CODEN: CVREAU. ISSN: 0008-6363.
DT Article
LA English
ED Entered STN: 12 Aug 1999
Last Updated on STN: 12 Aug 1999

L4 ANSWER 51 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:289153 BIOSIS
DN PREV199900289153

AU Su, Zhi; Bridge, John H.B.; Philipson, Kenneth D.; Spitzer, Kenneth W.;
 Barry, William H. [Reprint author]
 CS Division of Cardiology, University of Utah Health Sciences Center, 50
 North Medical Drive, Salt Lake City, UT, 84132, USA
 SO Journal of Molecular and Cellular Cardiology, (May, 1999) Vol. 31, No. 5,
 pp. 1125-1135. print.
 CODEN: JMCDAJ. ISSN: 0022-2828.
 DT Article
 LA English
 ED Entered STN: 5 Aug 1999
 Last Updated on STN: 5 Aug 1999

L4 ANSWER 52 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:266056 BIOSIS
 DN PREV199900266056
 TI Myocardial dysfunction in donor hearts: A possible etiology.
 AU Owen, Virginia J. [Reprint author]; Burton, Paul B. J.; Michel, Martin C.;
 Zolk, Oliver; Boehm, Michael; Pepper, John R.; Barton, Paul J. R.; Yacoub,
 Magdi H.; Harding, Sian E.
 CS Cardiothoracic Surgery, National Heart and Lung Institute at Imperial
 College School of Medicine, Dovehouse St, London, SW3 6LY, UK
 SO Circulation, (May 18, 1999) Vol. 99, No. 19, pp. 2565-2570. print.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Article
 LA English
 ED Entered STN: 15 Jul 1999
 Last Updated on STN: 15 Jul 1999

L4 ANSWER 53 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:265910 BIOSIS
 DN PREV199900265910
 TI Alterations in gene expression of proteins involved in the calcium
 handling in patients with atrial fibrillation.
 AU Van Gelder, Isabelle C. [Reprint author]; Brundel, Bianca J. J. M.;
 Henning, Robert H.; Tuinenburg, Anton E.; Tieleman, Robert G.; Deelman,
 Leo; Grandjean, Jan G.; De Kam, Pieter Jan; Van Gilst, Wiek H.; Crijns,
 Harry J. G. M.
 CS Department of Cardiology, Thoraxcenter, University Hospital Groningen,
 9700 RB, Groningen, Netherlands
 SO Journal of Cardiovascular Electrophysiology, (April, 1999) Vol. 10, No. 4,
 pp. 552-560. print.
 ISSN: 1045-3873.
 DT Article
 LA English
 ED Entered STN: 15 Jul 1999
 Last Updated on STN: 20 Aug 1999

L4 ANSWER 54 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:263444 BIOSIS
 DN PREV199900263444
 TI Na⁺/Ca²⁺ exchanger isoforms expressed in cultured ***human*** retinal
 pigment epithelial cells.
 AU Mangini, N. J. [Reprint author]; Chen, W. [Reprint author]; Kennedy, B.
 G.; Wang, Q. [Reprint author]
 CS Department of Ophthalmology and Visual Sciences, University Illinois at
 Chicago College of Medicine, Chicago, IL, USA
 SO IOVS, (March 15, 1999) Vol. 40, No. 4, pp. S925. print.
 Meeting Info.: Annual Meeting of the Association for Research in Vision
 and Ophthalmology. Fort Lauderdale, Florida, USA. May 9-14, 1999.
 Association for Research in Vision and Ophthalmology.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 15 Jul 1999
 Last Updated on STN: 15 Jul 1999

L4 ANSWER 55 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:219115 BIOSIS
 DN PREV199900219115
 TI A circularized ***sodium*** - ***calcium*** ***exchanger*** exon
 2 transcript.
 AU Li, Xiao-Fang; Lytton, Jonathan [Reprint author]
 CS Dept. of Biochemistry and Molecular Biology, University of Calgary Health
 Sciences Centre, 3330 Hospital Dr. NW, Calgary, AB, T2N 4N1, Canada

8153-8160. print.
CODEN: JBCHA3. ISSN: 0021-9258.

DT Article
LA English
ED Entered STN: 7 Jun 1999
Last Updated on STN: 7 Jun 1999

L4 ANSWER 56 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:217932 BIOSIS
DN PREV199900217932
TI Mechanisms of altered excitation-contraction coupling in canine
tachycardia-induced heart failure, II: Model studies.
AU Winslow, Raimond L. [Reprint author]; Rice, Jeremy; Jafri, Saleet; Marban,
Eduardo; O'Rourke, Brian
CS Department of Biomedical Engineering, Johns Hopkins University School of
Medicine, 720 Rutland Ave, 411 Traylor Research Bldg, Baltimore, MD,
21205, USA
SO Circulation Research, (March 19, 1999) Vol. 84, No. 5, pp. 571-586. print.
CODEN: CIRUAL. ISSN: 0009-7330.

DT Article
LA English
ED Entered STN: 26 May 1999
Last Updated on STN: 26 May 1999

L4 ANSWER 57 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:217931 BIOSIS
DN PREV199900217931
TI Mechanisms of altered excitation-contraction coupling in canine
tachycardia-induced heart failure, I: Experimental studies.
AU O'Rourke, Brian [Reprint author]; Kass, David A.; Tomaselli, Gordon F.;
Kaab, Stefan; Tunin, Richard; Marban, Eduardo
CS Division of Cardiology, Department of Medicine, Johns Hopkins University,
720 Rutland Avenue, 844 Ross Building, Baltimore, MD, 21205, USA
SO Circulation Research, (March 19, 1999) Vol. 84, No. 5, pp. 562-570. print.
CODEN: CIRUAL. ISSN: 0009-7330.

DT Article
LA English
ED Entered STN: 26 May 1999
Last Updated on STN: 26 May 1999

L4 ANSWER 58 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:194919 BIOSIS
DN PREV199900194919
TI Gene expression of Na/Ca exchanger during development in ***human***
fetal heart.
AU Qu, Y. [Reprint author]; Ghatpande, A. [Reprint author]; El-Sherif, N.
[Reprint author]; Boutjdir, M. [Reprint author]
CS V.A. Medical and SUNY/HS Centers, Brooklyn, NY, 11209, USA
SO Biophysical Journal, (Jan., 1999) Vol. 76, No. 1 PART 2, pp. A300. print.
Meeting Info.: Forty-third Annual Meeting of the Biophysical Society.
Baltimore, Maryland, USA. February 13-17, 1999.
CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 25 May 1999
Last Updated on STN: 25 May 1999

L4 ANSWER 59 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:193611 BIOSIS
DN PREV199900193611
TI Helix packing of the cardiac Na⁺-Ca²⁺ exchanger: Proximity of TMS 3 and
TMS 8.
AU Qiu, Z. [Reprint author]; Nicoll, D. A. [Reprint author]; Philipson, K. D.
[Reprint author]
CS Dept. of Physiology, UCLA, Los Angeles, CA, USA
SO Biophysical Journal, (Jan., 1999) Vol. 76, No. 1 PART 2, pp. A252. print.
Meeting Info.: Forty-third Annual Meeting of the Biophysical Society.
Baltimore, Maryland, USA. February 13-17, 1999.
CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English

Last Updated on STN: 25 May 1999

L4 ANSWER 60 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:192379 BIOSIS
DN PREV199900192379
TI Relaxation is a voltage-dependent process in failed ***human***
ventricular myocytes.
AU Gaughan, John P. [Reprint author]; Jeevanandam, Valluvan [Reprint author];
Houser, Steven R. [Reprint author]
CS Temple University School of Medicine, 3420 North Broad St., Philadelphia,
PA, 19140, USA
SO Biophysical Journal, (Jan., 1999) Vol. 76, No. 1 PART 2, pp. A366. print.
Meeting Info.: Forty-third Annual Meeting of the Biophysical Society.
Baltimore, Maryland, USA. February 13-17, 1999.
CODEN: BIOJAU. ISSN: 0006-3495.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 May 1999
Last Updated on STN: 5 May 1999

L4 ANSWER 61 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:123171 BIOSIS
DN PREV199900123171
TI Relationship between Na⁺-Ca²⁺-exchanger protein levels and diastolic
function of failing ***human*** myocardium.
AU Hasenfuss, Gerd [Reprint author]; Schillinger, Wolfgang; Lehnart, Stephan
E.; Preuss, Michael; Pieske, Burkert; Maier, Lars S.; Prestle, Juergen;
Minami, Kazutomo; Just, Hanjoerg
CS Universitaet Goettingen, Zentrum Innere Medizin, Abteilung Kardiologie
Pneumologie, Robert-Koch-Strasse 40, 37075 Goettingen, Germany
SO Circulation, (Feb. 9, 1999) Vol. 99, No. 5, pp. 641-648. print.
CODEN: CIRCAZ. ISSN: 0009-7322.
DT Article
LA English
ED Entered STN: 12 Mar 1999
Last Updated on STN: 12 Mar 1999

L4 ANSWER 62 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:123039 BIOSIS
DN PREV199900123039
TI Characterization of a (Ca²⁺)_i-dependent current in ***human*** atrial
and ventricular cardiomyocytes in the absence of Na⁺ and K⁺.
AU Koester, Olaf F. [Reprint author]; Szigeti, Gyula P.; Beuckelmann, Dirk J.
CS Dep. Internal Med. III, Univ. Cologne, Joseph-Stetzmann-Strasse 9, 50924
Cologne, Germany
SO Cardiovascular Research, (Jan., 1999) Vol. 41, No. 1, pp. 175-187. print.
CODEN: CVREAU. ISSN: 0008-6363.
DT Article
LA English
ED Entered STN: 12 Mar 1999
Last Updated on STN: 12 Mar 1999

L4 ANSWER 63 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:94560 BIOSIS
DN PREV199900094560
TI Sarcoplasmic reticulum proteins in heart failure.
AU Lehnart, Stephan E.; Schillinger, Wolfgang; Pieske, Burkert; Prestle,
Jurgen; Just, Hanjorg; Hasenfuss, Gerd [Reprint author]
CS Abteilung Kardiologie Pneumologie, Univ. Goettingen, Robert-Koch-Str. 40,
37075 Goettingen, Germany
SO Johnson, R. G., Jr. [Editor]; Kranias, E. G. [Editor]. Ann. N. Y. Acad.
Sci., (1998) pp. 220-230. Annals of the New York Academy of Sciences;
Cardiac sarcoplasmic reticulum function and regulation of contractility.
print.
Publisher: New York Academy of Sciences, 2 East 63rd Street, New York, New
York 10021, USA. Series: Annals of the New York Academy of Sciences.
Meeting Info.: Conference. Washington, D.C., USA. September 27-30, 1997.
New York Academy of Sciences.
CODEN: ANYAA9. ISSN: 0077-8923. ISBN: 1-57331-130-8 (paper), 1-57331-129-4
(cloth).
DT Book
Conference; (Meeting)
Book; (Book Chapter)

LA English
 ED Entered STN: 1 Mar 1999
 Last Updated on STN: 1 Mar 1999

L4 ANSWER 64 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:34332 BIOSIS
 DN PREV199900034332
 TI Parameters of lymphocyte Na⁺-Ca²⁺ regulation and blood pressure: The gender effect.
 AU Horiguchi, Makoto; Kimura, Masayuki; Skurnick, Joan; Aviv, Abraham [Reprint author]
 CS Hypertension Res. Cent., Univ. Med. Dent. NJ, New Jersey Med. Sch., 185 S Orange Avenue, Room F-464, Newark, NJ 07103, USA
 SO Hypertension (Dallas), (Nov., 1998) Vol. 32, No. 5, pp. 869-874. print.
 CODEN: HPRTDN. ISSN: 0194-911X.
 DT Article
 LA English
 ED Entered STN: 3 Feb 1999
 Last Updated on STN: 3 Feb 1999

L4 ANSWER 65 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:14766 BIOSIS
 DN PREV199900014766
 TI Influence of SR Ca²⁺-ATPase and Na⁺-Ca²⁺-exchanger on the force-frequency relation.
 AU Schillinger, W.; Lehnart, S. E.; Prestle, J.; Preuss, M.; Pieske, B.; Maier, L. S.; Meyer, M.; Just, H.; Hasenfuss, G. [Reprint author]
 CS Universitaetsklin. Goettingen, Zent. Innere Med. Kardiol. Pneumol., Robert-Koch-Str. 40, 37075 Goettingen, Germany
 SO Basic Research in Cardiology, (1998) Vol. 93, No. SUPPL. 1, pp. 38-45. print.
 CODEN: BRCAB7. ISSN: 0300-8428.
 DT Article
 LA English
 ED Entered STN: 11 Jan 1999
 Last Updated on STN: 11 Jan 1999

L4 ANSWER 66 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1999:14765 BIOSIS
 DN PREV199900014765
 TI Post-rest contraction amplitude in myocytes from failing ***human*** ventricle.
 AU Davia, K.; Harding, S. E. [Reprint author]
 CS Imperial Coll. Sci. Technol. Med., Royal Brompton Campus, Dovehouse St., London SW3 6LY, UK
 SO Basic Research in Cardiology, (1998) Vol. 93, No. SUPPL. 1, pp. 33-37. print.
 CODEN: BRCAB7. ISSN: 0300-8428.
 DT Article
 LA English
 ED Entered STN: 11 Jan 1999
 Last Updated on STN: 11 Jan 1999

L4 ANSWER 67 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:523863 BIOSIS
 DN PREV199800523863
 TI Decreased protein level and activity of the Na⁺, K⁺-ATPase but unchanged abundance and activity of the Na⁺, Ca²⁺-exchanger in the failing ***human*** myocardium.
 AU Mueller-Ehmsen, J. H. [Reprint author]; Diedriches, H. [Reprint author]; Thompson, C. B.; Wang, J.; Frank, K.; McDonough, A. A.; Schwinger, R. H. G. [Reprint author]
 CS Klinik II Innere Medizin Universitaet Koeln, Cologne, Germany
 SO European Heart Journal, (Aug., 1998) Vol. 19, No. ABST. SUPPL., pp. 407. print.
 Meeting Info.: XXth Congress of the European Society of Cardiology. Vienna, Austria. August 22-26, 1998. European Society of Cardiology.
 CODEN: EHJODF. ISSN: 0195-668X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 22 Dec 1998
 Last Updated on STN: 22 Dec 1998

AN 1998:523860 BIOSIS
 DN PREV199800523860
 TI SR Ca²⁺-ATPase and Na⁺ Ca²⁺-exchange differently contribute to myocardial relaxation in end-stage failing compared to nonfailing ***human*** myocardium.
 AU Maier, Lars S. [Reprint author]; Bers, Donald M.; Weber, Thomas [Reprint author]; Hasenfuss, Gerd [Reprint author]; Pieske, Burkert [Reprint author]
 CS Medizinische Klinik III, Albert-Ludwigs-Universitaet, Freiburg, Germany
 SO European Heart Journal, (Aug., 1998) Vol. 19, No. ABST. SUPPL., pp. 406. print.
 Meeting Info.: XXth Congress of the European Society of Cardiology. Vienna, Austria. August 22-26, 1998. European Society of Cardiology. CODEN: EHJODF. ISSN: 0195-668X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 22 Dec 1998
 Last Updated on STN: 22 Dec 1998

L4 ANSWER 69 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:481956 BIOSIS
 DN PREV199800481956
 TI The effect of high-salt diet intake on muscular exercise ability in young Japanese women.
 AU Fukuba, Yoshiyuki [Reprint author]; Makino, Shiho; Takeda, Yuko; Kawashima, Junko; Murakami, Haruka; Miura, Akira
 CS Dep. Exercise Sci. Physiol., Sch. Health Sci., Hiroshima Women's Univ., 1-1-7 Ujina-higashi, Minami-ku, Hiroshima 734-8558, Japan
 SO Applied Human Science, (July, 1998) Vol. 17, No. 4, pp. 145-148. print. ISSN: 1341-3473.
 DT Article
 LA English
 ED Entered STN: 5 Nov 1998
 Last Updated on STN: 5 Nov 1998

L4 ANSWER 70 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:420277 BIOSIS
 DN PREV199800420277
 TI SR and Na/Ca exchange contribute to the Cai²⁺ transient of failing ***human*** ventricular myocytes.
 AU Dipla, Konstantina; Jeevanandam, Valluvan; Margulies, Kenneth B.; Houser, Steven R.
 CS Dep. Physiol., Temple U. Sch. Med., Philadelphia, PA, USA
 SO Journal of Molecular and Cellular Cardiology, (June, 1998) Vol. 30, No. 6, pp. A90. print.
 Meeting Info.: XVI World Congress of the International Society for Heart Research: Cardiovascular Biology and Medicine into the 21st Century. CODEN: JMCDAJ. ISSN: 0022-2828.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 2 Oct 1998
 Last Updated on STN: 5 Nov 1998

L4 ANSWER 71 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:415199 BIOSIS
 DN PREV199800415199
 TI Characterization of the plasma membrane calcium pump in T cells: Modulation and memory.
 AU Bautista, Diana M.; Hoth, Markus; Lewis, Ricahrd S.
 CS Dep. Molecular and Cellular Physiol., Stanford Univ., Stanford, CA, USA
 SO Journal of General Physiology, (July, 1998) Vol. 112, No. 1, pp. 22A. print.
 Meeting Info.: Fifty-second Annual Meeting of the Society of General Physiologists. Woods Hole, Massachusetts, USA. September 10-12, 1998. CODEN: JGPLAD. ISSN: 0022-1295.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 2 Oct 1998
 Last Updated on STN: 2 Oct 1998

L4 ANSWER 72 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:387930 BIOSIS

TI Summary of studies of changes in vascular reactivity caused by natriuretic hormones.
 AU Purdy, R. E. [Reprint author]
 CS Dep. Pharmacol., Univ. Calif. Irvine, Irvine, CA 92697-4625, USA
 SO Clinical and Experimental Hypertension, (July-Aug., 1998) Vol. 20, No. 5-6, pp. 705-716. print.
 ISSN: 1064-1963.
 DT Article
 LA English
 ED Entered STN: 10 Sep 1998
 Last Updated on STN: 10 Sep 1998

L4 ANSWER 73 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:350378 BIOSIS
 DN PREV199800350378
 TI AMPA receptor-mediated excitotoxicity in ***human*** NT2-N neurons results from loss of intracellular Ca²⁺ homeostasis following marked elevation of intracellular Na⁺.
 AU Itoh, Takayuki; Itoh, Aki; Horiuchi, Kazumi; Pleasure, David [Reprint author]
 CS Div. Neurol. Res., Child. Hosp. Phila., 34th St. and Civic Cent. Blvd., Philadelphia, PA 19104, USA
 SO Journal of Neurochemistry, (July, 1998) Vol. 71, No. 1, pp. 112-124. print.
 CODEN: JONRA9. ISSN: 0022-3042.
 DT Article
 LA English
 ED Entered STN: 13 Aug 1998
 Last Updated on STN: 10 Sep 1998

L4 ANSWER 74 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:334986 BIOSIS
 DN PREV199800334986
 TI Cloning and sequence analysis of a new, Na/Ca exchanger-related protein from ***human*** heart.
 AU Quednau, B. D.; Philipson, K. D.
 CS Cardiovascular Res. Lab., UCLA Sch. Med., Los Angeles, CA 90095-1760, USA
 SO Biophysical Journal, (Feb., 1998) Vol. 74, No. 2 PART 2, pp. A197. print.
 Meeting Info.: Forty-second Annual Meeting of the Biophysical Society. Kansas City, Missouri, USA. February 22-26, 1998.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 12 Aug 1998
 Last Updated on STN: 12 Aug 1998

L4 ANSWER 75 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:334958 BIOSIS
 DN PREV199800334958
 TI A circularized exon 2 transcript of the Na-Ca exchanger.
 AU Li, X.-F.; Lytton, J.
 CS Dep. Med. Biochem., Univ. Calgary, Calgary, AB T2N 4N1, Canada
 SO Biophysical Journal, (Feb., 1998) Vol. 74, No. 2 PART 2, pp. A193. print.
 Meeting Info.: Forty-second Annual Meeting of the Biophysical Society. Kansas City, Missouri, USA. February 22-26, 1998.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 12 Aug 1998
 Last Updated on STN: 10 Sep 1998

L4 ANSWER 76 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:260790 BIOSIS
 DN PREV199800260790
 TI Membrane topology of the rat brain Na⁺-Ca²⁺ exchanger.
 AU Cook, Orna; Low, Walter; Rahamimoff, Hannah [Reprint author]
 CS Dep. Biochem., Hebrew Univ.-Hadassah Med. Sch., Jerusalem, Israel
 SO Biochimica et Biophysica Acta, (April 22, 1998) Vol. 1371, No. 1, pp. 40-52. print.
 CODEN: BBACAQ. ISSN: 0006-3002.
 DT Article

ED Entered STN: 9 Jun 1998
Last Updated on STN: 9 Jun 1998

L4 ANSWER 77 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:243845 BIOSIS
DN PREV199800243845
TI Immunohistochemical localization of the Na⁺/Ca²⁺ exchanger in
human retina and RPE.
AU Loeffler, K. U. [Reprint author]; Chen, W.; Mangini, N. J.
CS Dep. Ophthalmol., Bonn Univ., Bonn, Germany
SO IOVS, (March 15, 1998) Vol. 39, No. 4, pp. S1052. print.
Meeting Info.: Annual Meeting of the Association for Research in Vision
and Ophthalmology. Fort Lauderdale, Florida, USA. May 10-15, 1998.
Association for Research in Vision and Ophthalmology.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 4 Jun 1998
Last Updated on STN: 4 Jun 1998

L4 ANSWER 78 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:224375 BIOSIS
DN PREV199800224375
TI Cloning of the multipartite promoter of the ***sodium*** -
calcium ***exchanger*** gene NCX1 and characterization of its
activity in vascular smooth muscle cells.
AU Scheller, Timo; Kraev, Alexander; Skinner, Sven; Carafoli, Ernesto
[Reprint author]
CS Lab. Biochemistry III, Swiss Federal Inst. Technol., Universitaetsstrasse
16, CH-8092 Zurich, Switzerland
SO Journal of Biological Chemistry, (March 27, 1998) Vol. 273, No. 13, pp.
7643-7649. print.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
LA English
OS Genbank-Y12878; Genbank-Y12885; Genbank-Y13032; Genbank-Y13033;
Genbank-Y13034; Genbank-Y13035; Genbank-Y13036; Genbank-Y13037
ED Entered STN: 20 May 1998
Last Updated on STN: 20 May 1998

L4 ANSWER 79 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:202509 BIOSIS
DN PREV199800202509
TI Contribution of sodium-calcium exchange to contraction and relaxation in
developing ***human*** cardiac myocytes.
AU Chin, T. [Reprint author]; Morgan, T.; Kasmarek, T.; Chen, Q.; Ward, K.
CS East Tenn. State Univ., Johnson City, TN 37614, USA
SO FASEB Journal, (March 20, 1998) Vol. 12, No. 5, pp. A710. print.
Meeting Info.: Annual Meeting of the Professional Research Scientists on
Experimental Biology 98, Part II. San Francisco, California, USA. April
18-22, 1998. Federation of American Societies for Experimental Biology.
CODEN: FAJOEC. ISSN: 0892-6638.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 4 May 1998
Last Updated on STN: 12 Aug 1998

L4 ANSWER 80 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:191065 BIOSIS
DN PREV199800191065
TI AMPA glutamate receptor-mediated toxicity in NT2-N neurons is primarily
caused by excessive sodium loading.
AU Itoh, Takayuki [Reprint author]; Itoh, Aki [Reprint author]; Horiuchi,
Kazumi; Pleasure, David [Reprint author]
CS Div. Neurology Res., Children's Hosp.-Phila., Philadelphia, PA 19104, USA
SO Journal of Neurochemistry, (1998) Vol. 70, No. SUPPL. 1, pp. S13. print.
Meeting Info.: 29th Annual Meeting of the American Society for
Neurochemistry. Denver, Colorado, USA. March 7-11, 1998. American Society
for Neurochemistry.
CODEN: JONRA9. ISSN: 0022-3042.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English

Last Updated on STN: 12 Aug 1998

L4 ANSWER 81 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:155097 BIOSIS
DN PREV199800155097
TI Transoesophageal echocardiographic assessment of cardiac donors -molecular
and cellular correlates.
AU Burton, P. B. J.; Owen, V. J.; Tadgkarimi, S.; Harding, S. E.; Yacoub, M.
H.
CS NHLI, Imperial Coll., London, UK
SO Journal of Heart and Lung Transplantation, (Jan., 1998) Vol. 17, No. 1,
pp. 46. print.
Meeting Info.: Eighteenth Annual Meeting and Scientific Sessions of the
International Society for Heart and Lung Transplantation. Chicago,
Illinois, USA. April 15-18, 1998. International Society for Heart and Lung
Transplantation.
ISSN: 1053-2498.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 31 Mar 1998
Last Updated on STN: 31 Mar 1998

L4 ANSWER 82 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:73451 BIOSIS
DN PREV199800073451
TI ***Sodium*** - ***calcium*** ***exchanger*** in cultured
human retinal pigment epithelium.
AU Mangini, Nancy J. [Reprint author]; Haugh-Scheidt, Laura; Valle, Jason E.;
Cragoe, Edward J., Jr.; Ripps, Harris; Kennedy, Brian G.
CS UIC, Dep. Ophthalmol. Visual Sci., 1855 W. Taylor St., Chicago, IL 60612,
USA
SO Experimental Eye Research, (Dec., 1997) Vol. 65, No. 6, pp. 821-834.
print.
CODEN: EXERA6. ISSN: 0014-4835.
DT Article
LA English
ED Entered STN: 24 Feb 1998
Last Updated on STN: 20 Mar 1998

L4 ANSWER 83 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:43653 BIOSIS
DN PREV199800043653
TI Correction of PREVIEWS 99606099. Alteration of excitation-contraction
coupling in the failing ***human*** heart. Correction of title from
Calcium handling proteins in the failing ***human*** heart. Erratum
published in Basic Research in Cardiology Vol. 92. Iss. 4. 1997. p. 287.
AU Hasenfuss, G. [Reprint author]; Meyer, M.; Schillinger, W.; Preuss, M.;
Pieske, B.; Just, H.
CS Medizinische Klinik III, Univ. Freiburg, Hugstetter Str. 55, 79106
Freiburg, Germany
SO Basic Research in Cardiology, (Aug., 1997) Vol. 92, No. 4, pp. 87-93.
print.
CODEN: BRCAB7. ISSN: 0300-8428.
DT Article
Errata
Errata
General Review; (Literature Review)
LA English
ED Entered STN: 27 Jan 1998
Last Updated on STN: 27 Jan 1998

L4 ANSWER 84 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:37437 BIOSIS
DN PREV199800037437
TI Molecular biology of calcium channels in the cardiovascular system.
AU Katz, Arnold M. [Reprint author]
CS Cardiol. Div., Univ. Connecticut Health Cent., 263 Farmington Ave.,
Farmington, CT 06030-1305, USA
SO American Journal of Cardiology, (Nov. 6, 1997) Vol. 80, No. 9A, pp.
17I-22I. print.
CODEN: AJCDAG. ISSN: 0002-9149.
DT Article
LA English
ED Entered STN: 14 Jan 1998

L4 ANSWER 85 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:16162 BIOSIS
 DN PREV199800016162
 TI Frequency-dependent changes in intracellular Na⁺-concentration in isolated
 human myocardium.
 AU Maier, Lars S.; Hasenfuss, Gerd; Pieske, Burkert [Reprint author]
 CS Albert Ludwigs Univ., Freiburg, Germany
 SO Circulation, (10/21/97) Vol. 96, No. 8 SUPPL., pp. I178. print.
 Meeting Info.: 70th Scientific Sessions of the American Heart Association.
 Orlando, Florida, USA. November 9-12, 1997.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 5 Jan 1998
 Last Updated on STN: 24 Feb 1998

L4 ANSWER 86 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:480517 BIOSIS
 DN PREV199799779720
 TI Frequency-dependent changes of intracellular Na⁺-concentration in isolated
 human myocardium.
 AU Pieske, B. [Reprint author]; Maier, L. [Reprint author]; Minami, K.; Just,
 H. [Reprint author]; Hasenfuss, G. [Reprint author]
 CS Med. Klin. III, Albert-Ludwigs-Univ. Freiburg, Freiburg, Germany
 SO European Heart Journal, (1997) Vol. 18, No. ABSTR. SUPPL., pp. 484.
 Meeting Info.: XIXth Congress of the European Society of Cardiology
 together with the 32nd Annual General Meeting of the Association of
 European Paediatric Cardiologists (AEPC). Stockholm, Sweden. August 24-28,
 1997.
 CODEN: EHJODF. ISSN: 0195-668X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 4 Nov 1997
 Last Updated on STN: 10 Dec 1997

L4 ANSWER 87 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:467335 BIOSIS
 DN PREV199799766538
 TI ***Human*** brain does not express rat brain ***sodium*** -
 calcium ***exchanger*** NCX2 homolog.
 AU Yu, L.; Colvin, R. A.
 CS Program Neurobiol., Dep. Biol. Sci., Ohio Univ. Coll. Osteopathic Med.,
 Athens, OH 45701, USA
 SO Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 136.
 Meeting Info.: 27th Annual Meeting of the Society for Neuroscience, Part
 1. New Orleans, Louisiana, USA. October 25-30, 1997.
 ISSN: 0190-5295.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 4 Nov 1997
 Last Updated on STN: 10 Dec 1997

L4 ANSWER 88 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:414485 BIOSIS
 DN PREV199799706528
 TI Na⁺/Ca²⁺ exchanger in Drosophila: Cloning, expression and transport
 differences.
 AU Ruknudin, Abdul; Valdivia, Carmen; Kofuji, Paulo; Leiderer, W. J.;
 Schulze, Dan H. [Reprint author]
 CS Dep. Microbiol. Immunol., 655 W. Baltimore St., Baltimore, MD 21201, USA
 SO American Journal of Physiology, (1997) Vol. 273, No. 1 PART 1, pp.
 C257-C265.
 CODEN: AJPHAP. ISSN: 0002-9513.
 DT Article
 LA English
 ED Entered STN: 24 Sep 1997
 Last Updated on STN: 24 Sep 1997

L4 ANSWER 89 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

DN PREV199799606099
 TI Calcium handling proteins in the failing ***human*** heart.
 AU Hasenfuss, G. [Reprint author]; Meyer, M.; Schillinger, W.; Preuss, M.;
 Pieske, B.; Just, H.
 CS Medizinische Klinik III, Univ. Freiburg, Hugstetter Str. 55, 79106
 Freiburg, Germany
 SO Basic Research in Cardiology, (1997) Vol. 92, No. SUPPL. 1, pp. 87-93.
 CODEN: BRCAB7. ISSN: 0300-8428.
 DT Article
 General Review; (Literature Review)
 LA English
 ED Entered STN: 26 Jul 1997
 Last Updated on STN: 4 Sep 1997

L4 ANSWER 90 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:315608 BIOSIS
 DN PREV199799606096
 TI Expression and function of the cardiac Na⁺/Ca²⁺ exchanger in postnatal
 development of the rat, in experimental-induced cardiac hypertrophy and in
 the failing ***human*** heart.
 AU Studer, R. [Reprint author]; Reinecke, H.; Vetter, R.; Holtz, J.; Drexler,
 H.
 CS Hans Reinecke, Helmut Drexler Universitaetsklinik, Innere Medizin III,
 Kardiologie und Angiologie, Breisacher Str. 33, 79106 Freiburg, Germany
 SO Basic Research in Cardiology, (1997) Vol. 92, No. SUPPL. 1, pp. 53-58.
 CODEN: BRCAB7. ISSN: 0300-8428.
 DT Article
 LA English
 ED Entered STN: 26 Jul 1997
 Last Updated on STN: 4 Sep 1997

L4 ANSWER 91 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:255100 BIOSIS
 DN PREV199799554303
 TI Increase in force of contraction by activation of the Na⁺/Ca²⁺-exchanger
 in ***human*** myocardium.
 AU Mueller-Ehmsen, Jochen; Frank, Konrad; Brixius, Klara; Schwinger, Robert
 H. G. [Reprint author]
 CS Klinik III fuer Innere Medizin der Univ. zu Koeln, Joseph-Stelzmann-
 Strasse 9, 50924 Koeln, Germany
 SO British Journal of Clinical Pharmacology, (1997) Vol. 43, No. 4, pp.
 399-405.
 CODEN: BCPHBM. ISSN: 0306-5251.
 DT Article
 LA English
 ED Entered STN: 13 Jun 1997
 Last Updated on STN: 9 Jul 1997

L4 ANSWER 92 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:142474 BIOSIS
 DN PREV199799441677
 TI Novel functional difference between Drosophila and ***human***
 Na⁺/Ca²⁺ exchangers.
 AU Ruknudin, A. [Reprint author]; Lederer, W. J.; Schulze, D. H. [Reprint
 author]
 CS Dep. Microbiol. and Immunol., Univ. Md. at Baltimore, MD 21201, USA
 SO Biophysical Journal, (1997) Vol. 72, No. 2 PART 2, pp. A247.
 Meeting Info.: 41st Annual Meeting of the Biophysical Society. New
 Orleans, Louisiana, USA. March 2-6, 1997.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 2 Apr 1997
 Last Updated on STN: 2 May 1997

L4 ANSWER 93 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:142006 BIOSIS
 DN PREV199799441209
 TI Ni-2⁺ uptake mediated by the ***human*** cardiac Na-Ca exchanger.
 AU Egger, M.; Ruknudin, A.; Niggli, E. [Reprint author]; Schuzle, D. H.;
 Lederer, W. J.
 CS Dep. Physiol., Univ. Bern, Bern, Switzerland
 SO Biophysical Journal, (1997) Vol. 72, No. 2 PART 2, pp. A164.
 Meeting Info.: 41st Annual Meeting of the Biophysical Society. New

DT CODEN: BIOJAU. ISSN: 0006-3495.
 Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 2 Apr 1997
 Last Updated on STN: 2 May 1997

L4 ANSWER 94 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:141435 BIOSIS
 DN PREV199799440638
 TI Deletion of the alternatively spliced region of the Na⁺/Ca²⁺ exchanger, NCX1, reduces functional activity.
 AU Luo, S. [Reprint author]; Neubauer, C. F.; Ruknudin, A. [Reprint author]; He, S. [Reprint author]; Lederer, W. J.; Schulze, D. H. [Reprint author]
 CS Univ. Md., Dep. Microbiology Immunology, Baltimore, MD 21201, USA
 SO Biophysical Journal, (1997) Vol. 72, No. 2 PART 2, pp. A64.
 Meeting Info.: 41st Annual Meeting of the Biophysical Society. New Orleans, Louisiana, USA. March 2-6, 1997.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 2 Apr 1997
 Last Updated on STN: 2 May 1997

L4 ANSWER 95 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:83448 BIOSIS
 DN PREV199799375161
 TI The sympathetic nervous system in heart failure: Modulation of cardiac function.
 AU Drexler, H.
 CS Med. Hochschule Hannover, Konstanty-Gutschowstr. 8, 30625 Hannover, Germany
 SO Zeitschrift fuer Kardiologie, (1996) Vol. 85, No. SUPPL. 6, pp. 247-252.
 CODEN: ZKRDX. ISSN: 0300-5860.
 DT Article
 LA German
 ED Entered STN: 26 Feb 1997
 Last Updated on STN: 26 Feb 1997

L4 ANSWER 96 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:72869 BIOSIS
 DN PREV199799372072
 TI Molecular characterization of the ***human*** airway smooth muscle Na⁺/Ca²⁺ exchanger.
 AU Pitt, Anthony [Reprint author]; Knox, Alan J.
 CS Dep. Respiratory Med., City Hosp., Nottingham NG5 1PB, UK
 SO American Journal of Respiratory Cell and Molecular Biology, (1996) Vol. 15, No. 6, pp. 726-730.
 CODEN: AJRBEL. ISSN: 1044-1549.
 DT Article
 LA English
 OS EMBL-X91815
 ED Entered STN: 11 Feb 1997
 Last Updated on STN: 25 Mar 1997

L4 ANSWER 97 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:4573 BIOSIS
 DN PREV199799303776
 TI Relationship between diastolic function and protein levels of ***sodium*** - ***calcium*** - ***exchanger*** in end-stage failing ***human*** hearts.
 AU Hasenfuss, Gerd; Preuss, Michael; Lehnart, Stephan; Prestle, Juergen; Meyer, Markus; Just, Hanjoerg
 CS Univ. Freiburg, Freiburg, Germany
 SO Circulation, (1996) Vol. 94, No. 8 SUPPL., pp. I433.
 Meeting Info.: 69th Scientific Sessions of the American Heart Association. New Orleans, Louisiana, USA. November 10-13, 1996.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 7 Jan 1997

L4 ANSWER 98 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1997:2187 BIOSIS
 DN PREV199799301390
 TI Increased sensitivity of ***human*** heart to inotropic stimulation
 with Na channel activator or cardiac glycosides associated with decreased
 expression of sodium pump isoforms.
 AU McDonough, Alicia A. [Reprint author]; Wang, Jiangnan; Frank, Konrad;
 CS Muller-Ehmsen, Jochen; Schwinger, Robert H. G.
 SO Univ. Southern Calif., Los Angeles, CA, USA
 Circulation, (1996) Vol. 94, No. 8 SUPPL., pp. I24.
 Meeting Info.: 69th Scientific Sessions of the American Heart Association.
 New Orleans, Louisiana, USA. November 10-13, 1996.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 7 Jan 1997
 Last Updated on STN: 7 Jan 1997

L4 ANSWER 99 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:520901 BIOSIS
 DN PREV199699243257
 TI Distribution and signal transduction of angiotensin II AT-1 and AT-2
 receptors.
 AU Capponi, Alessandro M.
 CS Div. Endocrinol., Univ. Hosp., Rue Micheli-du-Crest 24, CH-1211 Geneva 14,
 Switzerland
 SO Blood Pressure, (1996) Vol. 5, No. SUPPL. 2, pp. 41-46.
 ISSN: 0803-7051.
 DT Article
 General Review; (Literature Review)
 LA English
 ED Entered STN: 22 Nov 1996
 Last Updated on STN: 23 Nov 1996

L4 ANSWER 100 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:520830 BIOSIS
 DN PREV199699243186
 TI Regional expression of sodium pump subunit isoforms and Na⁺-Ca⁺⁺ exchanger
 in the ***human*** heart.
 AU Wang, Jiangnan; Schwinger, Robert H. G.; Frank, Konrad; Mueller-Ehmsen,
 Jochen; Martin-Vasallo, Pablo; Pressley, Thomas A.; Xiang, Anny; Erdmann,
 Erland; McDonough, Alicia A. [Reprint author]
 CS Dep. Physiol. Biophysics, Univ. Southern California Sch. Med., 1333 San
 Pablo St., Los Angeles, CA 90033, USA
 SO Journal of Clinical Investigation, (1996) Vol. 98, No. 7, pp. 1650-1658.
 CODEN: JCINAO. ISSN: 0021-9738.
 DT Article
 LA English
 ED Entered STN: 22 Nov 1996
 Last Updated on STN: 23 Jan 1997

L4 ANSWER 101 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:508833 BIOSIS
 DN PREV199699231189
 TI The organization of the ***human*** gene NCX1 encoding the
 sodium - ***calcium*** ***exchanger***
 AU Kraev, Alexander; Chumakov, Ilya; Carafoli, Ernesto [Reprint author]
 CS Lab. Biochem. III, Swiss Federal Inst. Technol., Universitaetsstr. 16,
 CH-8092 Zurich, Switzerland
 SO Genomics, (1996) Vol. 37, No. 1, pp. 105-112.
 CODEN: GNMCEP. ISSN: 0888-7543.
 DT Article
 LA English
 OS EMBL-X91213; EMBL-X91214; EMBL-X91215; EMBL-X91216; EMBL-X91217;
 EMBL-X91221; EMBL-X91614; EMBL-X91647; EMBL-X91963; EMBL-X92368;
 Genbank-X91213; Genbank-X91214; Genbank-X91215; Genbank-X91216;
 Genbank-X91217; Genbank-X91221; Genbank-X91614; Genbank-X91647;
 Genbank-X91963; Genbank-X92368
 ED Entered STN: 14 Nov 1996
 Last Updated on STN: 10 Dec 1996

L4 ANSWER 102 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:454219 BIOSIS

TI Hyperventilation induces two vasoconstrictory periods.
 AU Wojtowicz, D. [Reprint author]; Engelmann, L.
 CS Inst. Physiol. II, Univ. Jena, Teichgraben 8, 07743 Jena, Germany
 SO Pfluegers Archiv European Journal of Physiology, (1996) Vol. 432, No. 3
 SUPPL., pp. R132.
 Meeting Info.: Carl-Ludwig-Symposium. Leipzig, Germany. May 18-20, 1995.
 CODEN: PFLABK. ISSN: 0031-6768.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 7 Oct 1996
 Last Updated on STN: 5 Nov 1996

L4 ANSWER 103 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:409006 BIOSIS
 DN PREV199699131362
 TI Expression of an active Na⁺/Ca²⁺ exchanger isoform lacking the six
 C-terminal transmembrane segments.
 AU Gabellini, Nadia [Reprint author]; Zatti, Alessandra; Rispoli, Giorgio;
 Navangione, Anacleto; Carafoli, Ernesto
 CS Dipartimento di Chimica Biologica, Univ. degli studi di Padova, Via
 Trieste, 75, I-35121 Padova, Italy
 SO European Journal of Biochemistry, (1996) Vol. 239, No. 3, pp. 897-904.
 CODEN: EJBCAI. ISSN: 0014-2956.
 DT Article
 LA English
 ED Entered STN: 10 Sep 1996
 Last Updated on STN: 10 Sep 1996

L4 ANSWER 104 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:391960 BIOSIS
 DN PREV199699114316
 TI Molecular biological studies of the cardiac ***sodium*** -
 calcium ***exchanger***
 AU Kraev, Alexander; Chumakov, Ilya; Carafoli, Ernesto [Reprint author]
 CS Lab. Biochem. III, Swiss Fed. Inst. Technol., Universitätsstr. 16, CH-8092
 Zurich, Switzerland
 SO Hilgemann, D. W. [Editor]; Philipson, K. D. [Editor]; Vassort, G.
 [Editor]. Ann. N. Y. Acad. Sci., (1996) pp. 103-109. Annals of the New
 York Academy of Sciences; Sodium-calcium exchange.
 Publisher: New York Academy of Sciences, 2 East 63rd Street, New York, New
 York 10021, USA. Series: Annals of the New York Academy of Sciences.
 Meeting Info.: Third International Conference. Woods Hole, Massachusetts,
 USA. April 23-26, 1995.
 CODEN: ANYAA9. ISSN: 0077-8923. ISBN: 1-57331-001-8 (paper), 1-57331-000-X
 (cloth).
 DT Book
 Conference; (Meeting)
 Book; (Book Chapter)
 Conference; (Meeting Paper)
 LA English
 ED Entered STN: 3 Sep 1996
 Last Updated on STN: 11 Oct 1996

L4 ANSWER 105 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:343445 BIOSIS
 DN PREV199699065801
 TI Vascular smooth muscle.
 AU Siegel, G.
 CS Inst. Physiol., Freien Univ. Berlin, Fachbereich Natur
 Sozialwissenschaftliche Grundlagenmedizin Med. Oekol., Arnimallee 22,
 14195 Berlin, Germany
 SO Greger, R. [Editor]; Windhorst, U. [Editor]. (1996) pp. 1941-1964.
 Comprehensive human physiology: From cellular mechanisms to integration,
 Vols. 1 and 2.
 Publisher: Springer-Verlag, Heidelberger Platz 3, D-1000 Berlin, Germany;
 Springer-Verlag New York, Inc., 175 Fifth Avenue, New York, New York
 10010, USA.
 ISBN: 3-540-58109-X.
 DT Book
 Book; (Book Chapter)
 LA English
 ED Entered STN: 5 Aug 1996
 Last Updated on STN: 26 Sep 1996

AN 1996:343442 BIOSIS
 DN PREV199699065798
 TI Calcium-mediated control of cardiac contractility at the cellular level.
 AU Langer, G. A.
 CS UCLA Sch. Med., Cardiovasc. Res. Lab., Dep. Physiol., Macdonald Res. Lab.
 Build., 675 Circle Dr. S., Los Angeles, CA 90095, USA
 SO Greger, R. [Editor]; Windhorst, U. [Editor]. (1996) pp. 1857-1864.
 Comprehensive human physiology: From cellular mechanisms to integration,
 Vols. 1 and 2.
 Publisher: Springer-Verlag, Heidelberger Platz 3, D-1000 Berlin, Germany;
 Springer-Verlag New York, Inc., 175 Fifth Avenue, New York, New York
 10010, USA.
 ISBN: 3-540-58109-X.
 DT Book
 Book; (Book Chapter)
 LA English
 ED Entered STN: 5 Aug 1996
 Last Updated on STN: 26 Sep 1996

L4 ANSWER 107 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:312577 BIOSIS
 DN PREV199699034933
 TI Pathophysiological targets for beta-blocker therapy in congestive heart
 failure.
 AU Just, H.
 CS Med. Universitaetsklin. Freiburg im Breisgau, Abt. Innere Med.
 III/Kardiolog., Angiologie, 79016 Freiburg im Breisgau, Hugstetterstr. 55,
 Germany
 SO European Heart Journal, (1996) Vol. 17, No. SUPPL. B, pp. 2-7.
 CODEN: EHJODF. ISSN: 0195-668X.
 DT Article
 LA English
 ED Entered STN: 11 Jul 1996
 Last Updated on STN: 11 Jul 1996

L4 ANSWER 108 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:239069 BIOSIS
 DN PREV199698787198
 TI Annexin VI overexpression targeted to heart alters cardiomyocyte function
 in transgenic mice.
 AU Guteski-Hamblin, Ann-Marie [Reprint author]; Song, Guojie; Walsh, Richard;
 A.; Frenzke, Marie; Boivin, Gregory P.; Dorn, Gerald W. II; Kaetzel,
 Marcia A.; Horseman, Nelson D.; Dedman, John R.
 CS Mol. Cellular Physiol., Univ. Cincinnati, PO Box 670576, Cincinnati, OH
 45267-0576, USA
 SO American Journal of Physiology, (1996) Vol. 270, No. 3 PART 2, pp.
 H1091-H1100.
 CODEN: AJPHAP. ISSN: 0002-9513.
 DT Article
 LA English
 ED Entered STN: 28 May 1996
 Last Updated on STN: 28 May 1996

L4 ANSWER 109 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:159600 BIOSIS
 DN PREV199698731735
 TI Aging does not affect steady-state expression of the Na⁺/Ca²⁺ exchanger
 in rat brain.
 AU Colvin, Robert A. [Reprint author]; Walker, Jon P.; Schummers, James;
 Davis, Nancy
 CS Dep. Biol. Sci., Ohio Univ., Athens, OH 45701, USA
 SO Cellular and Molecular Neurobiology, (1996) Vol. 16, No. 1, pp. 11-19.
 CODEN: CMNEDI. ISSN: 0272-4340.
 DT Article
 LA English
 ED Entered STN: 11 Apr 1996
 Last Updated on STN: 11 Apr 1996

L4 ANSWER 110 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:141021 BIOSIS
 DN PREV199698713156
 TI Sodium/calcium exchange activities in cultured lymphocyte and monocyte
 cell lines.
 AU Balasubramanyam, M.; Condrescu, M.; Reeves, J. P.; Gardner, J. P.
 CS UMDNJ-New Jersey Med. Sch., Newark, NJ 07103, USA

Meeting Info.: 40th Annual Meeting of the Biophysical Society. Baltimore, Maryland, USA. February 17-21, 1996.

CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Apr 1996
Last Updated on STN: 2 May 1996

L4 ANSWER 111 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1996:141007 BIOSIS
DN PREV199698713142
TI Characterization and expression of the Drosophila Na⁺/Ca²⁺ exchanger cDNA in Xenopus oocytes.
AU Ruknudin, A. [Reprint author]; Wisel, S.; Valdivia, C.; Kofuji, P.; Lederer, W. J.; Schulze, D. H.
CS Dep. Microbiol./Immunology, Univ. Maryland Sch. Med., Baltimore, MD 21201, USA
SO Biophysical Journal, (1996) Vol. 70, No. 2 PART 2, pp. A202.
Meeting Info.: 40th Annual Meeting of the Biophysical Society. Baltimore, Maryland, USA. February 17-21, 1996.
CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Apr 1996
Last Updated on STN: 2 May 1996

L4 ANSWER 112 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1996:141000 BIOSIS
DN PREV199698713135
TI Functional analysis of the ***human*** cardiac Na/Ca exchanger expressed in SF9 cells.
AU Egger, M. [Reprint author]; Lipp, P. [Reprint author]; Schwaller, B.; Lederer, W. J.; Schulze, D. H.; Niggli, E. [Reprint author]
CS Dep. Physiol., Univ. Bern, Bern, Switzerland
SO Biophysical Journal, (1996) Vol. 70, No. 2 PART 2, pp. A201.
Meeting Info.: 40th Annual Meeting of the Biophysical Society. Baltimore, Maryland, USA. February 17-21, 1996.
CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Apr 1996
Last Updated on STN: 2 May 1996

L4 ANSWER 113 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1996:138802 BIOSIS
DN PREV199698710937
TI NA-CA exchange in the chronically infarcted rabbit heart.
AU Litwin, S. E.
CS Salt Lake City Veterans Affairs Med. Cent., Salt Lake City, UT, USA
SO Journal of Investigative Medicine, (1996) Vol. 44, No. 1, pp. 147A.
Meeting Info.: Meeting of the American Federation for Clinical Research, Western Region. Carmel, California, USA. February 14-17, 1996.
ISSN: 1081-5589.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Apr 1996
Last Updated on STN: 2 May 1996

L4 ANSWER 114 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1996:13144 BIOSIS
DN PREV199698585279
TI Enhanced expression of the Na⁺-Ca²⁺-exchanger alters the inotropic responsiveness in the failing ***human*** heart.
AU Flesch, Markus; Schwinger, Robert H. G.; Puetz, Frank; Suedkamp, Ferdinand; Mueller-Ehmsen, Jochen; Boehm, Michael
CS Univ. Cologne, Cologne, Germany
SO Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I588.
Meeting Info.: 68th Scientific Session of the American Heart Association. Anaheim, California, USA. November 13-16, 1995.
CODEN: CIRCAZ. ISSN: 0009-7322.

DT Conference; (Meeting)

LA English
 ED Entered STN: 4 Jan 1996
 Last Updated on STN: 28 Feb 1996

L4 ANSWER 115 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1996:9799 BIOSIS
 DN PREV199698581934
 TI Enhanced expression of the Na⁺-Ca²⁺-exchanger and its functional
 relevance in the failing ***human*** heart.
 AU Flesch, M.; Schwinger, R. H. G.; Mueller-Ehmsen, J.; Suedkarnp, F.; Puetz,
 F.; Boehm, M.
 CS Klinik III, Innere Med., Univ. Koeln, 50924 Koeln, Germany
 SO European Heart Journal, (1995) Vol. 16, No. ABSTR. SUPPL., pp. 458.
 Meeting Info.: XVIIth Congress of the European Society of Cardiology.
 Amsterdam, Netherlands. August 20-24, 1995.
 CODEN: EHJODF. ISSN: 0195-668X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 4 Jan 1996
 Last Updated on STN: 28 Feb 1996

L4 ANSWER 116 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:544905 BIOSIS
 DN PREV199698559205
 TI Calcium transport proteins in the nonfailing and failing heart: Gene
 expression and function.
 AU Wankerl, M. [Reprint author]; Schwartz, K.
 CS INSERM Unite 153, Pavillon Rambuteau, Hopital Pitie-Salpetriere, 47
 Boulevard de l'Hopital, F-75651 Paris Cedex 13, France
 SO Journal of Molecular Medicine (Berlin), (1995) Vol. 73, No. 10, pp.
 487-496.
 ISSN: 0946-2716.
 DT Article
 General Review; (Literature Review)
 LA English
 ED Entered STN: 31 Dec 1995
 Last Updated on STN: 28 Feb 1996

L4 ANSWER 117 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:463046 BIOSIS
 DN PREV199598477346
 TI Expression of a functionally active ***human*** renal ***sodium***
 - ***calcium*** ***exchanger*** lacking a signal sequence.
 AU Loo, Tip W.; Ho, Cheryl; Clarke, David M. [Reprint author]
 CS Dep. Med., Univ. Toronto, Room 7342, Med. Sci. Build., 1 King's College
 Circle, Toronto, ON M5S 1A8, Canada
 SO Journal of Biological Chemistry, (1995) Vol. 270, No. 33, pp. 19345-19350.
 CODEN: JBCHA3. ISSN: 0021-9258.
 DT Article
 LA English
 ED Entered STN: 27 Oct 1995
 Last Updated on STN: 14 Dec 1995

L4 ANSWER 118 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:326023 BIOSIS
 DN PREV199598340323
 TI Ca entry via Na/Ca exchange following intracellular store depletion in T
 lymphocytes.
 AU Gardner, Jeffrey P. [Reprint author]; Balasubranianyam, M.;
 Rohowsky-Kochan, Christine; Reeves, John R.
 CS Dep. Pediatrics, UMD-New Jersey Med. Sch., Newark, NY 07103, USA
 SO Journal of Cellular Biochemistry Supplement, (1995) Vol. 0, No. 21A, pp.
 70.
 Meeting Info.: Keystone Symposium on Control and Manipulation of the
 Immune Response. Taos, New Mexico, USA. March 16-22, 1995.
 ISSN: 0733-1959.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 2 Aug 1995
 Last Updated on STN: 13 Sep 1995

L4 ANSWER 119 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

DN PREV199598256620
 TI The organization of the ***human*** gene of the ***sodium***
 calcium ***exchanger***
 AU Kraev, A.; Carafoli, E.
 CS Lab. Biochem. III, Swiss Federal Inst. Technol., CH-8092 Zurich,
 Switzerland
 SO Experientia (Basel), (1995) Vol. 51, No. ABSTR., pp. A55.
 Meeting Info.: 27th Annual Meeting of the Swiss Societies for Experimental
 Biology (USGEB/USSBE). Fribourg, Switzerland. March 30-31, 1995.
 CODEN: EXPEAM. ISSN: 0014-4754.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 9 Jun 1995
 Last Updated on STN: 11 Jul 1995

L4 ANSWER 120 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:205816 BIOSIS
 DN PREV199598220116
 TI An alternative splicing site modifies the carboxyl-terminal trans-membrane
 domains of the Na⁺/Ca²⁺ exchanger.
 AU Gabellini, Nadia [Reprint author]; Iwata, Tomoko; Carafoli, Ernesto
 CS Dip. Chimica Biol., Univ. Studi Padova, Via Trieste 75, 35121 Padova,
 Italy
 SO Journal of Biological Chemistry, (1995) Vol. 270, No. 12, pp. 6917-6924.
 CODEN: JBCHA3. ISSN: 0021-9258.
 DT Article
 LA English
 ED Entered STN: 23 May 1995
 Last Updated on STN: 23 May 1995

L4 ANSWER 121 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:203561 BIOSIS
 DN PREV199598217861
 TI Eosin, a Potent Inhibitor of the Plasma Membrane Ca Pump, Does Not Inhibit
 the Cardiac Na-Ca Exchanger.
 AU Gatto, Craig; Hale, Calvin C.; Xu, Wanyan; Milanick, Mark A. [Reprint
 author]
 CS MA415 Med. Sci. Building, Dep. Physiol., Univ. Missouri, Columbia, MO
 65212, USA
 SO Biochemistry, (1995) Vol. 34, No. 3, pp. 965-972.
 CODEN: BICHAW. ISSN: 0006-2960.
 DT Article
 LA English
 ED Entered STN: 23 May 1995
 Last Updated on STN: 9 Jun 1995

L4 ANSWER 122 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:139802 BIOSIS
 DN PREV199598154102
 TI Alternative splicing modifies the C-terminal transmembrane domains of the
 Na⁺/Ca²⁺ exchanger.
 AU Gabellini, N. [Reprint author]; Iwata, T.; Carafoli, E. [Reprint author]
 CS Dep. Biol. Chem., Univ. Padova, 35121 Padova, Italy
 SO Biophysical Journal, (1995) Vol. 68, No. 2 PART 2, pp. A412.
 Meeting Info.: 39th Annual Meeting of the Biophysical Society. San
 Francisco, California, USA. February 12-16, 1995.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LA English
 ED Entered STN: 3 Apr 1995
 Last Updated on STN: 23 May 1995

L4 ANSWER 123 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1995:139794 BIOSIS
 DN PREV199598154094
 TI The autoinhibitory regions of the Ca pump (C28) and the Na/Ca exchanger
 (XIP) bind to ***human*** erythrocyte ankyrin and band 3.
 AU Xu, W.-Y.; Hale, C. C.; Milanick, M. A.
 CS Physiol., Univ. Mo., Columbia, MO 65212, USA
 SO Biophysical Journal, (1995) Vol. 68, No. 2 PART 2, pp. A411.
 Meeting Info.: 39th Annual Meeting of the Biophysical Society. San
 Francisco, California, USA. February 12-16, 1995.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 3 Apr 1995
Last Updated on STN: 23 May 1995

L4 ANSWER 124 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1995:139788 BIOSIS
DN PREV199598154088
TI Characterization of the Na/Ca exchanger cDNA in Drosophila.
AU Valdivia, C. [Reprint author]; Kofuji, P.; Lederer, W. J.; Schulze, D. H.
CS Dep. Physiol., Univ. Maryland Sch. Med., Baltimore, MD 21201, USA
SO Biophysical Journal, (1995) Vol. 68, No. 2 PART 2, pp. A410.
Meeting Info.: 39th Annual Meeting of the Biophysical Society. San Francisco, California, USA. February 12-16, 1995.
CODEN: BIOJAU. ISSN: 0006-3495.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 3 Apr 1995
Last Updated on STN: 23 May 1995

L4 ANSWER 125 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1995:129869 BIOSIS
DN PREV199598144169
TI Ankyrin-G: A new ankyrin gene with neural-specific isoforms localized at the axonal initial segment and node of Ranvier.
AU Kordeli, Ekaterini; Lambert, Stephen [Reprint author]; Bennett, Vann
CS Dep. Cell Biol., Duke Univ. Med. Cent., Durham, NC 27710, USA
SO Journal of Biological Chemistry, (1995) Vol. 270, No. 5, pp. 2352-2359.
CODEN: JBCHA3. ISSN: 0021-9258.

DT Article
LA English
ED Entered STN: 29 Mar 1995
Last Updated on STN: 29 Mar 1995

L4 ANSWER 126 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1995:28650 BIOSIS
DN PREV199598042950
TI Copper toxicity in cultured ***human*** skeletal muscle cells: The involvement of Na⁺/K⁺-ATPase and the Na⁺/Ca²⁺-exchanger.
AU Benders, Ad A. G. M.; Li, Jie; Lock, Robert A. C.; Bindels, Rene J. M.; Bonga, Sjoered E. Wendelaar; Veerkamp, Jacques H. [Reprint author]
CS Dep. Biochem., Fac. Med., University Nijmegen, PO Box 9101, NL-6500 HB, Nijmegen, Netherlands
SO Pfluegers Archiv European Journal of Physiology, (1994) Vol. 428, No. 5-6, pp. 461-467.
CODEN: PFLABK. ISSN: 0031-6768.

DT Article
LA English
ED Entered STN: 11 Jan 1995
Last Updated on STN: 23 Feb 1995

L4 ANSWER 127 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1995:12793 BIOSIS
DN PREV199598027093
TI Enhanced gene expression and function of the cardiac Na⁺/Ca²⁺-exchanger in end-stage ***human*** heart failure.
AU Reinecke, H. [Reprint author]; Studer, R. [Reprint author]; Vetter, R.; Holtz, J.; Drexler, H. [Reprint author]
CS Medizinische Klinik III, Univ. Freiburg, Freiburg, Germany
SO European Heart Journal, (1994) Vol. 15, No. ABSTR. SUPPL., pp. 199.
Meeting Info.: Joint XIIth World Congress of Cardiology and the XVIth Congress of the European Society of Cardiology. Berlin, Germany. September 10-14, 1994.
CODEN: EHJODF. ISSN: 0195-668X.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 Jan 1995
Last Updated on STN: 5 Jan 1995

AN 1994:424586 BIOSIS
 DN PREV199497437586
 TI The ***human*** cardiac ***sodium*** - ***calcium***
 exchanger expressed in Sf9 cells.
 AU Niggli, E. [Reprint author]; Lipp, P. [Reprint author]; Kofuji, P.;
 Schulze, D. H.; Lederer, W. J.
 CS Dep. Physiol., Univ. Bern, Bern, Switzerland
 SO Journal of Physiology (Cambridge), (1994) Vol. 477P, No. 0, pp. 17P.
 Meeting Info.: Scientific Meeting of the Physiological Society. Liverpool,
 England, UK. April 11-13, 1994.
 CODEN: JPHYA7. ISSN: 0022-3751.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 3 Oct 1994
 Last Updated on STN: 10 Nov 1994

L4 ANSWER 129 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1994:420849 BIOSIS
 DN PREV199497433849
 TI Further analysis of the brain Na⁺/Ca²⁺ exchanger in Alzheimer's disease.
 AU Colvin, R. A.; Davis, N.; Wu, A.; Murphy, C. A.; Levengood, J.
 CS Dep. Biol. Sci., Ohio Univ. Coll. Osteopathic Med., Athens, OH 45701, USA
 SO Neurobiology of Aging, (1994) Vol. 15, No. SUPPL. 1, pp. S142-S143.
 Meeting Info.: Fourth International Conference on Alzheimer's Disease and
 Related Disorders. Minneapolis, Minnesota, USA. July 29-August 3, 1994.
 CODEN: NEAGDO. ISSN: 0197-4580.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 3 Oct 1994
 Last Updated on STN: 4 Oct 1994

L4 ANSWER 130 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1994:345720 BIOSIS
 DN PREV199497358720
 TI Cloning of the NCX2 isoform of the plasma membrane Na⁺-Ca²⁺ exchanger.
 AU Li, Zhaoping; Matsuoka, Satoshi; Hryshko, Larry V.; Nicoll, Debora A.;
 Bersohn, Malcolm M.; Burke, Edmund P.; Lifton, Richard P.; Philipson,
 Kenneth D. [Reprint author]
 CS Cardiovascular Research Lab., MRL 3-645, UCLA Sch. Med., Los Angeles, CA
 90024-1760, USA
 SO Journal of Biological Chemistry, (1994) Vol. 269, No. 26, pp. 17434-17439.
 CODEN: JBCHA3. ISSN: 0021-9258.
 DT Article
 LA English
 OS EMBL-U08141; Genbank-U08141
 ED Entered STN: 8 Aug 1994
 Last Updated on STN: 1 Sep 1994

L4 ANSWER 131 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1994:252520 BIOSIS
 DN PREV199497265520
 TI Cerebral vasospasm and free radicals.
 AU MacDonald, R. Loch [Reprint author]; Weir, Bryce K.
 CS Sect. Neurosurg., MC3026, Univ. Chicago Med. Cent., 5841 S. Maryland Ave.,
 Chicago, IL 60637, USA
 SO Free Radical Biology and Medicine, (1994) Vol. 16, No. 5, pp. 633-643.
 CODEN: FRBMEH. ISSN: 0891-5849.
 DT Article
 General Review; (Literature Review)
 LA English
 ED Entered STN: 8 Jun 1994
 Last Updated on STN: 9 Jun 1994

L4 ANSWER 132 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1994:54008 BIOSIS
 DN PREV199497067008
 TI Changes in the Na⁺/Ca²⁺ exchanger gene expression in aging rat brain and
 in ***human*** brains with Alzheimer's pathology.
 AU Janapati, V.; Yu, L.; Colvin, R. A.
 CS Dep. Biol. Sci., Ohio Univ. Coll. Osteopathic Med., Athens, OH 45701, USA
 SO Society for Neuroscience Abstracts, (1993) Vol. 19, No. 1-3, pp. 1473.
 Meeting Info.: 23rd Annual Meeting of the Society for Neuroscience.
 Washington, D.C., USA. November 7-12, 1993.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 3 Feb 1994
Last Updated on STN: 3 Feb 1994

L4 ANSWER 133 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:44022 BIOSIS
DN PREV199497057022
TI Functional consequences of altered expression of SR-Ca-2+-ATPase and Na
+-Ca-2+-exchanger in failing ***human*** myocardium.
AU Hasenfuss, Gerd; Reinecke, Hans; Studer, Roland; Pieske, Burkert; Holtz,
Juergen; Holubarsch, Christian; Just, Hanjoerg
CS Univ. Freiburg, Med. Klinik III, Freiburg, Germany
SO Circulation, (1993) Vol. 88, No. 4 PART 2, pp. I407.
Meeting Info.: 66th Scientific Sessions of the American Heart Association.
Atlanta, Georgia, USA. November 8-11, 1993.
CODEN: CIRCAZ. ISSN: 0009-7322.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Feb 1994
Last Updated on STN: 25 Mar 1994

L4 ANSWER 134 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:43951 BIOSIS
DN PREV199497056951
TI Enhanced expression and function of the cardiac Na+/Ca-2+-exchanger in
end-stage ***human*** heart failure.
AU Reinecke, Hans [Reprint author]; Studer, Roland [Reprint author]; Vetter,
Roland; Just, Hanjorg [Reprint author]; Holtz, Juergen; Drexler, Helmut
CS Div. Mol. Cardiol., Med. Clinic III, Univ. Freiburg, Freiburg, Germany
SO Circulation, (1993) Vol. 88, No. 4 PART 2, pp. I408.
Meeting Info.: 66th Scientific Sessions of the American Heart Association.
Atlanta, Georgia, USA. November 8-11, 1993.
CODEN: CIRCAZ. ISSN: 0009-7322.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Feb 1994
Last Updated on STN: 25 Mar 1994

L4 ANSWER 135 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:519165 BIOSIS
DN PREV199396132572
TI Is there a ***sodium*** - ***calcium*** ***exchanger*** in
macrophages and in lymphocytes.
AU Donnadieu, Emmanuel; Trautmann, Alain [Reprint author]
CS Lab. Neurobiologie, CNRS URA 295, Ecole Normale Supérieure, 46 rue d'Ulm,
F-75005 Paris, France
SO Pfluegers Archiv European Journal of Physiology, (1993) Vol. 424, No. 5-6,
pp. 448-455.
CODEN: PFLABK. ISSN: 0031-6768.

DT Article
LA English
ED Entered STN: 19 Nov 1993
Last Updated on STN: 13 Jan 1994

L4 ANSWER 136 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:503074 BIOSIS
DN PREV199396127081
TI Regional distribution in the rat central nervous system of a mRNA encoding
a portion of the cardiac ***sodium*** - ***calcium***
exchanger isolated from cerebellar granule neurons.
AU Marlier, Lionel N. J.-L.; Zheng, Tian [Reprint author]; Tang, Jian;
Grayson, Dennis R.
CS Fidla-Georgetown Inst. Neurosci., Georgetown Univ., 3900 Reservoir Rd. NW,
Washington, DC 20007, USA
SO Molecular Brain Research, (1993) Vol. 20, No. 1-2, pp. 21-39.
CODEN: MBREE4. ISSN: 0169-328X.

DT Article
LA English
ED Entered STN: 5 Nov 1993
Last Updated on STN: 13 Jan 1994

L4 ANSWER 137 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:343079 BIOSIS
 DN PREV199396040079
 TI Mapping of the ***human*** cardiac ***sodium*** / ***calcium***
 exchanger gene (NCX1) by fluorescent in situ hybridization to
 chromosome region 2p22 fwdarw p23.
 AU McDaniel, L. D.; Lederer, W. J.; Kofuji, P.; Schulze, D. H.; Kieval, R.;
 Schultz, Roger A. [Reprint author]
 CS McDermott Cent., North Campus, Univ. Southwest Med. Cent., 6000 Harry
 Hines Blvd., Room 10.118, Dallas, TX 75235-8591, USA
 SO Cytogenetics and Cell Genetics, (1993) Vol. 63, No. 3, pp. 192-193.
 CODEN: CGCGBR. ISSN: 0301-0171.
 DT Article
 LA English
 ED Entered STN: 26 Jul 1993
 Last Updated on STN: 27 Jul 1993

L4 ANSWER 138 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:331828 BIOSIS
 DN PREV199345026553
 TI Expression of the cardiac ***sodium*** - ***calcium*** -
 exchanger by the vaccinia system.
 AU Iwata, T.; Guerini, D.; Carafoli, E.
 CS Lab. Biochem. III, ETH Zurich, Switzerland
 SO Experientia (Basel), (1993) Vol. 49, No. ABSTR., pp. A49.
 Meeting Info.: 25th Annual Meeting of the Swiss Society for Experimental
 Biology. Lausanne, Switzerland. March 25-26, 1993.
 CODEN: EXPEAM. ISSN: 0014-4754.
 DT Conference; (Meeting)
 LA English
 ED Entered STN: 16 Jul 1993
 Last Updated on STN: 31 Aug 1993

L4 ANSWER 139 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:295664 BIOSIS
 DN PREV199396013889
 TI Stable expression of the cardiac ***sodium*** - ***calcium***
 exchanger in CHO cells.
 AU Pijuan, Vivian [Reprint author]; Zhuang, Yingxin; Smith, Lucinda; Kroupis,
 Chris; Condrescu, Madalina; Aceto, Joseph F.; Reeves, John P.; Smith,
 Jeffrey Bingham
 CS Dep. Pharmacol., Sch. Med., Univ. Ala., Birmingham, AL 35294, USA
 SO American Journal of Physiology, (1993) Vol. 264, No. 4 PART 1, pp.
 C1066-C1074.
 CODEN: AJPHAP. ISSN: 0002-9513.
 DT Article
 LA English
 ED Entered STN: 23 Jun 1993
 Last Updated on STN: 8 Aug 1993

L4 ANSWER 140 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:289456 BIOSIS
 DN PREV199345007581
 TI Myocardial gene expression of ***sodium*** / ***calcium***
 exchanger and sarcoplasmic reticulum calcium-ATPase in
 human heart failure.
 AU Reinecke, Hans [Reprint author]; Studer, Roland [Reprint author];
 Philipson, Kenneth D.; Bilger, Johannes [Reprint author]; Eschenhagen,
 Thomas; Boehm, Michael; Just, Hanjoerg [Reprint author]; Holtz, Juergen
 [Reprint author]; Drexler, Helmut [Reprint author]
 CS Arbeitsgruppe Mol.-Kardiol. Freiburg, Germany
 SO Circulation, (1992) Vol. 86, No. 4 SUPPL. 1, pp. I860.
 Meeting Info.: 65th Scientific Sessions of the American Heart Association.
 New Orleans, Louisiana, USA. November 16-19, 1992.
 CODEN: CIRCAZ. ISSN: 0009-7322.
 DT Conference; (Meeting)
 LA English
 ED Entered STN: 17 Jun 1993
 Last Updated on STN: 18 Jun 1993

L4 ANSWER 141 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:267796 BIOSIS
 DN PREV199344129946
 TI Physiological role of the ***sodium*** - ***calcium***
 exchanger in modulating platelet intracellular calcium and

AU Li, Yun; Fyfe, Chris; Cragoe, Edward J.; Bose, Ratna
 CS Dep. Pharmacol., Univ. Manitoba, Winnipeg, Can. R3E 0W3, Canada
 SO FASEB Journal, (1993) Vol. 7, No. 3-4, pp. A564.
 Meeting Info.: Meeting of the Federation of American Societies for
 Experimental Biology on Experimental Biology '93. New Orleans, Louisiana,
 USA. March 28-April 1, 1993.
 CODEN: FAJOEC. ISSN: 0892-6638.
 DT Conference; (Meeting)
 LA English
 ED Entered STN: 27 May 1993
 Last Updated on STN: 13 Jul 1993

L4 ANSWER 142 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:251565 BIOSIS
 DN PREV199395130740
 TI Cloning of two isoforms of the rat brain ***sodium*** - ***calcium***
 exchanger gene and their functional expression in HeLa cells.
 AU Furman, Ian; Cook, Orna; Kasir, Judith; Rahamimoff, Hannah [Reprint
 author]
 CS Dep. Biochem., Hebrew Univ.-Hadassah Med. Sch., PO Box 1172, Jerusalem
 91010, Israel
 SO FEBS (Federation of European Biochemical Societies) Letters, (1993) Vol.
 319, No. 1-2, pp. 105-109.
 CODEN: FEBLAL. ISSN: 0014-5793.
 DT Article
 LA English
 OS Genbank-X68812; Genbank-X68813
 ED Entered STN: 21 May 1993
 Last Updated on STN: 13 Jul 1993

L4 ANSWER 143 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:248378 BIOSIS
 DN PREV199395127553
 TI Delineation of the role of a ***sodium*** , ***calcium***
 exchanger in regulating intracellular calcium in T cells.
 AU Wacholtz, Mary C. [Reprint author]; Cragoe., Edward J., Jr.; Lipsky, Peter
 E.
 CS Harold C. Simmons Arthritis Res. Center, Dep. Internal Med., University
 Texas Southwestern Med. Center Dallas, Dallas, TX 75235, USA
 SO Cellular Immunology, (1993) Vol. 147, No. 1, pp. 95-109.
 CODEN: CLIMB8. ISSN: 0008-8749.
 DT Article
 LA English
 ED Entered STN: 21 May 1993
 Last Updated on STN: 22 May 1993

L4 ANSWER 144 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:164433 BIOSIS
 DN PREV199395085483
 TI Cloning of the rat heart ***sodium*** - ***calcium***
 exchanger and its functional expression in HeLa cells.
 AU Low, Walter; Kasir, Judith; Rahamimoff, Hannah [Reprint author]
 CS Dep. Biochem., Hebrew University-Hadassah Med. Sch., P.O. Box 1172,
 Jerusalem, Israel
 SO FEBS (Federation of European Biochemical Societies) Letters, (1993) Vol.
 316, No. 1, pp. 63-67.
 CODEN: FEBLAL. ISSN: 0014-5793.
 DT Article
 LA English
 OS EMBL-X68191; Genbank-X68191
 ED Entered STN: 31 Mar 1993
 Last Updated on STN: 16 May 1993

L4 ANSWER 145 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:151597 BIOSIS
 DN PREV199344070397
 TI Rhodopsin and phototransduction.
 AU Hargrave, Paul A.; McDowell, Hugh
 CS Dep. Ophthalmology, Sch. Med., Univ. Fla., Gainesville, Fla. 32610, USA
 SO Friedlander, M. [Editor]; Mueckler, M. [Editor]. Int. Rev. Cytol., (1992)
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 Publisher: Academic Press, Inc., 1250 Sixth Ave., San Diego, California
 92101, USA; Academic Press Ltd., 14 Belgrave Square, 24-28 Oval Road,
 London NW1 70X, England, UK. Series: International Review of Cytology.

DT Article
 LA General Review; (Literature Review)
 ED English
 Entered STN: 19 Mar 1993
 Last Updated on STN: 16 May 1993

L4 ANSWER 146 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:137976 BIOSIS
 DN PREV199395070776
 TI Expression of the ***sodium*** , ***calcium*** ***exchanger***
 in a diverse tissues: A study using the cloned ***human*** cardiac
 sodium , ***calcium*** ***exchanger***
 AU Kofuji, Paulo; Hadley, Robert W.; Kieval, Robert S.; Lederer, W. J.
 [Reprint author]; Schulze, Dan H.
 CS Dep. Physiology, Univ. Maryland Sch. Med., 660 W. Redwood Street,
 Baltimore, MD 21201, USA
 SO American Journal of Physiology, (1992) Vol. 263, No. 6 PART 1, pp.
 C1241-C1249.
 CODEN: AJPHAP. ISSN: 0002-9513.

DT Article
 LA English
 OS Genbank-M96368
 ED Entered STN: 16 Mar 1993
 Last Updated on STN: 16 May 1993

L4 ANSWER 147 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1993:24464 BIOSIS
 DN PREV199395012664
 TI Rapid calcium extrusion via the ***sodium*** , ***calcium***
 exchanger of the ***human*** platelet.
 AU Valant, Peter A.; Adjei, Philip N.; Haynes, Duncan H.
 CS Dep. Mol. Cellular Pharmacol., University Miami Sch. Med., Miami, Fla.
 33101, USA
 SO Journal of Membrane Biology, (1992) Vol. 130, No. 1, pp. 63-82.
 CODEN: JMBBBO. ISSN: 0022-2631.

DT Article
 LA English
 ED Entered STN: 23 Dec 1992
 Last Updated on STN: 24 Dec 1992

L4 ANSWER 148 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1992:513874 BIOSIS
 DN PREV199243111324; BR43:111324
 TI CALCIUM EXTRUSION BY THE ***SODIUM*** ***CALCIUM***
 EXCHANGER OF THE ***HUMAN*** PLATELET.
 AU HAYNES D H [Reprint author]; VALANT P A; ADJEI P N
 CS DEP MOLECULAR AND CELLULAR PHARMACOL, UNIV MIAMI SCH MED, MIAMI, FLA
 33101, USA
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 ISSN: 007-8923. ISBN: 0-89766-694-1(PAPER), 0-89766-693-3(CLOTH).

DT Book
 Conference; (Meeting)
 FS BR
 LA ENGLISH
 ED Entered STN: 11 Nov 1992
 Last Updated on STN: 24 Dec 1992

L4 ANSWER 149 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1992:501661 BIOSIS
 DN PREV199294120186; BA94:120186
 TI GENETIC LINKAGE ANALYSIS IN FAMILIAL BENIGN HYPERCALCEMIA USING A
 CANDIDATE GENE STRATEGY I. STUDIES IN FOUR FAMILIES.
 AU HEATH H III [Reprint author]; LEPPERT M F; LIFTON R P; PENNISTON J T;
 EDENS M; JEROMINSKI L; LAAKSO K J; NELSON L; OTTERUD B; ET AL
 CS DIV ENDOCRINOL METABOLISM, UNIV UTAH MED CENT, 4C116 SOM, 50 NORTH MEDICAL
 DRIVE, SALT LAKE CITY, UTAH 84132, USA
 SO Journal of Clinical Endocrinology and Metabolism, (1992) Vol. 75, No. 3,
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 CODEN: JCEMAZ. ISSN: 0021-972X.

DT Article

LA ENGLISH
ED Entered STN: 9 Nov 1992
Last Updated on STN: 24 Dec 1992

L4 ANSWER 150 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:494878 BIOSIS
DN PREV199243104078; BR43:104078
TI MOLECULAR FUNCTION OF THE ***SODIUM*** ***CALCIUM***
EXCHANGER GUINEA-PIG RAT AND ***HUMAN***
AU LEDERER W J [Reprint author]; KOFUJI P; SCHULZE D; HADLEY R; KIEVAL R;
KIBRY M S; NIGGLI E
CS DEP PHYSIOLOGY, UNIV MD SCH MED, 660 W REDWOOD ST, BALTIMORE, MD 21201,
USA
SO Journal of Molecular and Cellular Cardiology, (1992) Vol. 24, No. SUPPL.
4, pp. S13.
Meeting Info.: 2ND INTERNATIONAL SYMPOSIUM ON THE MAMMALIAN MYOCARDIUM:
BIOCHEMICAL AND PHYSIOLOGICAL MECHANISMS UNDERLYING THE HEARTBEAT, LEEDS,
ENGLAND, UK, JULY 26-29, 1992. J MOL CELL CARDIOL.
CODEN: JMCDDAY. ISSN: 0022-2828.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 3 Nov 1992
Last Updated on STN: 4 Nov 1992

L4 ANSWER 151 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:339615 BIOSIS
DN PREV199243029165; BR43:29165
TI EVIDENCE FOR A BASOLATERAL ***SODIUM*** ***CALCIUM***
EXCHANGER IN PERFUSED ***HUMAN*** GASTRIC GLANDS USING
CONFOCAL AND VIDEO IMAGING MICROSCOPY.
AU GEIBEL J [Reprint author]; MODLIN I
CS SURGICAL GASTROINTESTINAL PATHOBIOLOG RES GROUP, YALE UNIV SCH MED, NEW
HAVEN, CONN, USA
SO Gastroenterology, (1992) Vol. 102, No. 4 PART 2, pp. A73.
Meeting Info.: DIGESTIVE DISEASE WEEK AND THE 93RD ANNUAL MEETING OF THE
AMERICAN GASTROENTEROLOGICAL ASSOCIATION, SAN FRANCISCO, CALIFORNIA, USA,
MAY 9-15, 1992. GASTROENTEROLOGY.
CODEN: GASTAB. ISSN: 0016-5085.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 16 Jul 1992
Last Updated on STN: 16 Jul 1992

L4 ANSWER 152 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:323583 BIOSIS
DN PREV199294025424; BA94:25424
TI MOLECULAR CLONING AND CHARACTERIZATION OF THE ***HUMAN*** CARDIAC
SODIUM ***CALCIUM*** ***EXCHANGER*** CDNA.
AU KOMURO I [Reprint author]; WENNINGER K E; PHILIPSON K D; IZUMO S
CS MOL MED UNIT, BETH ISRAEL HOSPITAL, BOSTON, MASS 02215, USA
SO Proceedings of the National Academy of Sciences of the United States of
America, (1992) Vol. 89, No. 10, pp. 4769-4773.
CODEN: PNASA6. ISSN: 0027-8424.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 11 Jul 1992
Last Updated on STN: 11 Jul 1992

L4 ANSWER 153 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:277239 BIOSIS
DN PREV199294001889; BA94:1889
TI ACTIVATION OF A RELAXATION CASCADE IN ISOLATED CORONARY ARTERIES BY BRIEF
ELECTRICAL PULSES.
AU KALSNER S [Reprint author]
CS DEP PHYSIOL, CITY UNIV NEW YORK MED SCH, CITY COLL NEW YORK, 138TH ST AND
CONVENT AVE, NEW YORK, NY 10031, USA
SO Journal of Pharmacology and Experimental Therapeutics, (1992) Vol. 261,
No. 1, pp. 209-224.
CODEN: JPETAB. ISSN: 0022-3565.
DT Article
FS BA
LA ENGLISH

Last Updated on STN: 9 Aug 1992

L4 ANSWER 154 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:224571 BIOSIS
DN PREV199242106071; BR42:106071
TI THE ***HUMAN*** CARDIAC ***SODIUM*** ***CALCIUM***
EXCHANGER CLONING SEQUENCING AND EXPRESSION.
AU KOFUJI P [Reprint author]; LEDERER W J; SCHULZE D H
CS DEP PHARM AND EXP THER, UNIV MD, SCH MED, BALTIMORE, MD 21201, USA
SO Biophysical Journal, (1992) Vol. 61, No. 2 PART 2, pp. A387.
Meeting Info.: JOINT ANNUAL MEETING OF THE BIOPHYSICAL SOCIETY AND THE
AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, HOUSTON, TEXAS,
USA, FEBRUARY 9-13, 1992. BIOPHYS J.
CODEN: BIOJAU. ISSN: 0006-3495.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 5 May 1992
Last Updated on STN: 6 May 1992

L4 ANSWER 155 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:188721 BIOSIS
DN PREV199293099671; BA93:99671
TI MAPPING OF THE GENE FOR THE CARDIAC SARCOLEMMA ***SODIUM***
CALCIUM ***EXCHANGER*** TO ***HUMAN*** CHROMOSOME
2P21-P23.
AU SHIEH B-H [Reprint author]; XIA Y; SPARKES R S; KLISAK I; LUSIS A J;
NICOLL D A; PHILIPSON K D
CS DEP MEDICINE, MOLECULAR BIOLOGY INSTITUTE, UNIVERSITY CALIFORNIA, LOS
ANGELES, CALIF 90024, USA
SO Genomics, (1992) Vol. 12, No. 3, pp. 616-617.
CODEN: GNMCEP. ISSN: 0888-7543.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 13 Apr 1992
Last Updated on STN: 14 Apr 1992

L4 ANSWER 156 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:177148 BIOSIS
DN PREV199242082148; BR42:82148
TI THE ***HUMAN*** CARDIAC ***SODIUM*** ***CALCIUM***
EXCHANGER CLONING SEQUENCING AND EXPRESSION.
AU KOFUJI P [Reprint author]; LEDERER W J; SCHULZE D H
CS DEP PHARM EXP THER, UNIV MD SCH MED, BALTIMORE, MD 21201, USA
SO FASEB Journal, (1992) Vol. 6, No. 1, pp. A387.
Meeting Info.: JOINT MEETING OF THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND
MOLECULAR BIOLOGY/BIOPHYSICAL SOCIETY, HOUSTON, TEXAS, USA, FEBRUARY 9-13,
1992. FASEB (FED AM SOC EXP BIOL) J.
CODEN: FAJOEC. ISSN: 0892-6638.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 2 Apr 1992
Last Updated on STN: 3 Apr 1992

L4 ANSWER 157 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:63467 BIOSIS
DN PREV199242027367; BR42:27367
TI MOLECULAR CHARACTERIZATION OF THE ***HUMAN*** CARDIAC ***SODIUM***
CALCIUM ***EXCHANGER*** CDNA.
AU KOMURO I [Reprint author]; WENNINGER K; PHILIPSON K D; IZUMO S
CS BETH ISRAEL HOSP, HARVARD MED SCH, BOSTON, MASS, USA
SO Circulation, (1991) Vol. 84, No. 4 SUPPL. 2, pp. II338.
Meeting Info.: 64TH SCIENTIFIC SESSIONS OF THE AMERICAN HEART ASSOCIATION,
ANAHEIM, CALIFORNIA, USA, NOVEMBER 11-14, 1991. CIRCULATION.
CODEN: CIRCAZ. ISSN: 0009-7322.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 21 Jan 1992
Last Updated on STN: 21 Jan 1992

L4 ANSWER 158 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:493686 BIOSIS

TI UNCHANGED EFFECTIVENESS OF THE SODIUM ION CHANNEL-ACTIVATOR BDF AND
 OUABAIN IN TERMINALLY FAILING COMPARED TO NONFAILING ***HUMAN***
 MYOCARDIUM.
 AU SCHWINGER R H G [Reprint author]; BOEHM M; SCHMIDT U; SCHULZ C; ERDMANN E
 CS MED KLINIK I, KLINIKUM GROSSHADERN, MARCHIONINISTR 15, D-8000 MUENCHEN 70,
 W GER
 SO European Heart Journal, (1991) Vol. 12, No. ABSTR. SUPPL, pp. 54.
 Meeting Info.: ABSTRACTS SELECTED FOR PRESENTATION AT THE XIIIITH CONGRESS
 OF THE EUROPEAN SOCIETY OF CARDIOLOGY, AMSTERDAM, NETHERLANDS, AUGUST
 18-22, 1991. EUR HEART J.
 CODEN: EHJODF. ISSN: 0195-668X.
 DT Conference; (Meeting)
 FS BR
 LA ENGLISH
 ED Entered STN: 3 Nov 1991
 Last Updated on STN: 4 Nov 1991

L4 ANSWER 159 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1991:330254 BIOSIS
 DN PREV199141026804; BR41:26804
 TI EVIDENCE FOR THE ROLE OF A ***SODIUM*** ***CALCIUM***
 EXCHANGER IN GENERATING THE MITOGEN INDUCED CALCIUM SIGNAL IN T
 LYMPHOCYTES.
 AU WACHOLTZ M C [Reprint author]; CRAGOE E J; LIPSKY P E
 CS UNIV TEX SOUTHWESTERN MED CENT, DALLAS, TEX 75235, USA
 SO FASEB Journal, (1991) Vol. 5, No. 5, pp. A1455.
 Meeting Info.: 75TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES
 FOR EXPERIMENTAL BIOLOGY, ATLANTA, GEORGIA, USA, APRIL 21-25, 1991. FASEB
 (FED AM SOC EXP BIOL) J.
 CODEN: FAJOEC. ISSN: 0892-6638.
 DT Conference; (Meeting)
 FS BR
 LA ENGLISH
 ED Entered STN: 20 Jul 1991
 Last Updated on STN: 20 Jul 1991

L4 ANSWER 160 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1991:218091 BIOSIS
 DN PREV199140103926; BR40:103926
 TI EFFECT OF CYCLIC AMP CYCLIC GMP AND PROTEIN KINASE ACTIVATION ON RESTING
 CYTOPLASMIC AND DENSE TUBULAR CALCIUM LEVELS IN THE ***HUMAN***
 PLATELET.
 AU JOHANSSON J [Reprint author]; TAO J; JY W; HAYNES D H
 CS DEP MOL CELL PHARMACOL, UNIV MIAMI SCH MED, MIAMI, FLA 33101, USA
 SO Biophysical Journal, (1991) Vol. 59, No. 2 PART 2, pp. 336A.
 Meeting Info.: THIRTY-FIFTH ANNUAL MEETING OF THE BIOPHYSICAL SOCIETY, SAN
 FRANCISCO, CALIFORNIA, USA, FEBRUARY 24-28, 1991. BIOPHYS J.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DT Conference; (Meeting)
 FS BR
 LA ENGLISH
 ED Entered STN: 5 May 1991
 Last Updated on STN: 14 Jun 1991

L4 ANSWER 161 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1990:519135 BIOSIS
 DN PREV199090136411; BA90:136411
 TI A TETRODOTOXIN AND MANGANESE INSENSITIVE SODIUM CURRENT IN DUCHENNE
 MUSCULAR DYSTROPHY.
 AU BKAILY G [Reprint author]; JASMIN G; TAUTU C; PROCHEK L; YAMAMOTO T;
 CS SCULPTOREANU A; PEYROW M; JACQUES D
 DEP PHYSIOLOGY BIOPHYSICS, FAC MED, UNIVERSITY SHERBROOKE, SHERBROOKE,
 QUEBEC, CANADA J1H 5N4
 SO Muscle and Nerve, (1990) Vol. 13, No. 10, pp. 939-948.
 CODEN: MUNEDE. ISSN: 0148-639X.
 DT Article
 FS BA
 LA ENGLISH
 ED Entered STN: 19 Nov 1990
 Last Updated on STN: 20 Nov 1990

L4 ANSWER 162 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1989:128315 BIOSIS
 DN PREV198987062968; BA87:62968
 TI AMILORIDE ANTIARRHYTHMIC AND ELECTROPHYSIOLOGICAL ACTIVITY IN THE DOG.

CS DEP MED, UNIV CALGARY, HEALTH SCI CENTRE, 3330 HOSPITAL DRIVE NW, CALGARY,
ALBERTA T2N 4N1, CANADA
SO Circulation, (1988) Vol. 78, No. 6, pp. 1469-1477.
CODEN: CIRCAZ. ISSN: 0009-7322.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 28 Feb 1989
Last Updated on STN: 28 Feb 1989

L4 ANSWER 163 OF 473 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1986:173060 BIOSIS
DN PREV198681083476; BA81:83476
TI INHIBITION OF ***SODIUM*** - ***CALCIUM*** ***EXCHANGER***
ACTIVITY IN CARDIAC AND SKELETAL MUSCLE SARCOLEMMA VESICLES BY MONOCLONAL
ANTIBODY 44D-7.
AU MICHALAK M [Reprint author]; QUACKENBUSH E J; LETARTE M
CS DIV CARDIOLOGY, HOSPITAL SICK CHILDREN, UNIV TORONTO, TORONTO, ONTARIO,
CANADA
SO Journal of Biological Chemistry, (1986) Vol. 261, No. 1, pp. 92-95.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 26 Apr 1986
Last Updated on STN: 26 Apr 1986

L4 ANSWER 164 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 2001:32924645 BIOTECHNO
TI Identification and characterization of a ***sodium*** / ***calcium***
exchanger, NCX-1, in osteoclasts and its role in bone resorption
AU Moonga B.S.; Davidson R.; Sun L.; Adebajo O.A.; Moser J.; Abedin M.;
Zaidi N.; Huang C.L.-H.; Zaidi M.
CS M. Zaidi, Mount Sinai Bone Program, Mount Sinai School of Medicine, One
Gustave Levy Place, New York, NY 10029, United States.
E-mail: mone.zaidi@mssm.edu
SO Biochemical and Biophysical Research Communications, (***2001***),
283/4 (770-775), 28 reference(s)
CODEN: BBRCA0 ISSN: 0006-291X
DT Journal; Article
CY United States
LA English
SL English

L4 ANSWER 165 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 2001:32695528 BIOTECHNO
TI Cardiac ***sodium*** - ***calcium*** ***exchanger*** : A
double-edged sword
AU Conway S.J.; Koushik S.V.
CS S.J. Conway, Inst. of Molec. Med. and Genetics, Department of Cell
Biology, Medical College of Georgia, 1120 15th Street, Augusta, GA
30912-2640, United States.
E-mail: sconway@mail.mcg.edu
SO Cardiovascular Research, (***2001***), 51/2 (194-197), 44
reference(s)
CODEN: CVREAU ISSN: 0008-6363
PUI S000863630100356X
DT Journal; Editorial
CY Netherlands
LA English

L4 ANSWER 166 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 1998:28103285 BIOTECHNO
TI Molecular cloning of a novel potassium-dependent ***sodium*** -
calcium ***exchanger*** from rat brain
AU Tsou M.; Rhee K.-H.; Bungard D.; Li X.-F.; Lee S.-L.; Auer R.N.; Lytton
J.
CS J. Lytton, University of Calgary, Department of Medical Biochemistry,
Health Sciences Centre, 3330 Hospital Dr. NW, Calgary, Alta. T2N 4N1,
Canada.
E-mail: jlytton@acs.ucalgary.ca
SO Journal of Biological Chemistry, *** (13 FEB 1998) *** , 273/7
(4155-4162), 45 reference(s)
CODEN: JBCHA3 ISSN: 0021-9258
DT Journal; Article

LA English
SL English

L4 ANSWER 167 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 1996:26194636 BIOTECHNO
TI Molecular biological studies of the cardiac ***sodium*** -
calcium ***exchanger***
AU Kraev A.; Chumakov I.; Carafoli E.
CS Laboratory of Biochemistry III, Swiss Federal Institute Technology,
Universitätsstrasse 16, CH-8092 Zurich, Switzerland.
SO Annals of the New York Academy of Sciences, (***1996***), 779/-
(103-109)
CODEN: ANYAA0 ISSN: 0077-8923
DT Journal; Conference Article
CY United States
LA English
SL English

L4 ANSWER 168 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 1996:26125217 BIOTECHNO
TI Colocalization of the dihydropyridine receptor, the plasma-membrane
calcium ATPase isoform 31 and the ***sodium*** / ***calcium***
exchanger to the junctional-membrane domain of transverse tubule
of rabbit skeletal muscle
AU Sacchetto R.; Margreth A.; Pelosi M.; Carafoli E.
CS Institute of Biochemistry, Swiss Federal Inst Technology (ETH),
Universitätsstrasse, CH-8092 Zurich, Switzerland.
SO European Journal of Biochemistry, (***1996***), 237/2 (483-488)
CODEN: EJBCAI ISSN: 0014-2956
DT Journal; Article
CY Germany, Federal Republic of
LA English
SL English

L4 ANSWER 169 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 1993:23337863 BIOTECHNO
TI ***Sodium*** / ***calcium*** ***exchanger*** in heart muscle:
Molecular biology, cellular function, and its special role in
excitation-contraction coupling
AU Schulze D.; Kofuji P.; Hadley R.; Kirby M.S.; Kieval R.S.; Doering A.;
Niggli E.; Lederer W.J.
CS Department of Physiology, Univ. of Maryland School of Medicine, 660 W
Redwood Street, Baltimore, MD 21201, United States.
SO Cardiovascular Research, (***1993***), 27/10 (1726-1734)
CODEN: CVREAU ISSN: 0008-6363
DT Journal; Conference Article
CY United Kingdom
LA English
SL English

L4 ANSWER 170 OF 473 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 1993:23118131 BIOTECHNO
TI Stable expression of the cardiac ***sodium*** - ***calcium***
exchanger in CHO cells
AU Pijuan V.; Zhuang Y.; Smith L.; Kroupis C.; Condrescu M.; Aceto J.F.;
Reeves J.P.; Smith J.B.
CS Dept. of Pharmacology, Schools of Medicine and Dentistry, Univ. of
Alabama, Birmingham, AL 35294, United States.
SO American Journal of Physiology - Cell Physiology, (***1993***), 264/4
33-4 (C1066-C1074)
CODEN: AJPCDD ISSN: 0002-9513
DT Journal; Article
CY United States
LA English
SL English

L4 ANSWER 171 OF 473 CANCERLIT on STN
AN 2002133747 CANCERLIT
DN 21602175 PubMed ID: 11735260
TI Regulation of sodium-calcium exchange and mitochondrial energetics by
Bcl-2 in the heart of transgenic mice.
CM Comment in: J Mol Cell Cardiol. 2001 Dec;33(12):2079-82
AU Zhu L; Yu Y; Chua B H; Ho Y S; Kuo T H
CS Department of Pathology, Wayne State University School of Medicine,
Detroit, Michigan 48201, USA.

SO JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, *** (2001 Dec) *** 33 (12)
2135-44.
Journal code: 0262322. ISSN: 0022-2828.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 2001692122
EM 200204
ED Entered STN: 20020726
Last Updated on STN: 20020726

L4 ANSWER 172 OF 473 CANCERLIT on STN
AN 2002110112 CANCERLIT
DN 21412509 PubMed ID: 11521739
TI The effect of 5'-(N,N-dimethyl)-amiloride on cytotoxic activity of
doxorubicin and vincristine in CEM cell lines.
AU Radvakova I; Mirossay A; Mojzis J; Mirossay L
CS Department of Pharmacology, Faculty of Medicine, Safarik University,
Kosice, Slovak Republic.
SO PHYSIOLOGICAL RESEARCH, *** (2001) *** 50 (3) 283-7.
Journal code: 9112413. ISSN: 0862-8408.
CY Czech Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 2001478657
EM 200201
ED Entered STN: 20020726
Last Updated on STN: 20020726

L4 ANSWER 173 OF 473 CANCERLIT on STN
AN 2002039344 CANCERLIT
DN 21284070 PubMed ID: 11392069
TI Gene therapy: a novel method for the treatment of myocardial ischemia and
reperfusion injury--mini-review.
AU Li F; Hayes J K; Wong K C
CS Department of Anesthesiology, University of Utah School of Medicine, Salt
Lake City, UT 84132, USA.
SO ACTA ANAESTHESIOLOGICA SINICA, *** (2000 Dec) *** 38 (4) 207-15. Ref:
73
Journal code: 9432542. ISSN: 0529-5769.
CY China (Republic: 1949-)
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 2001317800
EM 200106
ED Entered STN: 20020726
Last Updated on STN: 20020726

L4 ANSWER 174 OF 473 CANCERLIT on STN
AN 2000445576 CANCERLIT
DN 20445576 PubMed ID: 10993480
TI Inhibitors of Na⁺/Ca²⁺ exchanger prevent oxidant-induced intracellular
Ca²⁺ increase and apoptosis in a ***human*** hepatoma cell line.
AU Kim J A; Kang Y S; Lee S H; Lee Y S
CS College of Pharmacy, Yeungnam University, Kyongsan, Korea.
SO FREE RADICAL RESEARCH, *** (2000 Sep) *** 33 (3) 267-77.
Journal code: 9423872. ISSN: 1071-5762.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 2000443390
EM 200101
ED Entered STN: 20010423
Last Updated on STN: 20010423

L4 ANSWER 175 OF 473 CANCERLIT on STN
AN 2000380210 CANCERLIT
DN 20380210 PubMed ID: 10908415
TI Na⁺/Ca²⁺ exchanger isoforms of rat odontoblasts and osteoblasts.

CS Department of Oral Biochemistry, Goteborg University, Sweden.
 SO CALCIFIED TISSUE INTERNATIONAL, *** (2000 Jul) *** 67 (1) 60-7.
 Journal code: 7905481. ISSN: 0171-967X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 2001030470
 EM 200011
 ED Entered STN: 20010423
 Last Updated on STN: 20010423

L4 ANSWER 176 OF 473 CANCERLIT on STN
 AN 2000251054 CANCERLIT
 DN 20251054 PubMed ID: 10790152
 TI Histamine-induced Ca²⁺ oscillations in a ***human*** endothelial cell
 line depend on transmembrane ion flux, ryanodine receptors and endoplasmic
 reticulum Ca²⁺-ATPase.
 AU Paltauf-Doburzynska J; Frieden M; Spitaler M; Graier W F
 CS Department of Medical Biochemistry and Medical Molecular Biology,
 Karl-Franzens University of Graz, Harrachgasse 21/III, A-8010 Graz,
 Austria.
 SO JOURNAL OF PHYSIOLOGY, *** (2000 May 1) *** 524 Pt 3 701-13.
 Journal code: 0266262. ISSN: 0022-3751.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 2000251054
 EM 200007
 ED Entered STN: 20000811
 Last Updated on STN: 20000811

L4 ANSWER 177 OF 473 CANCERLIT on STN
 AN 2000222620 CANCERLIT
 DN 20222620 PubMed ID: 10761983
 TI The Na⁺-Ca²⁺ exchange inhibitor KB-R7943 inhibits high K⁺-induced
 increases in intracellular Ca²⁺ concentration and [3H]noradrenaline
 release in the ***human*** neuroblastoma SH-SY5Y.
 AU Nakamura H; Kawasaki Y; Arakawa N; Saeki M; Maeda S; Koyama Y; Baba A;
 Matsuda T
 CS Laboratory of Molecular Neuropharmacology, Graduate School of
 Pharmaceutical Sciences, Osaka University, Suita, Japan.
 SO NEUROCHEMICAL RESEARCH, *** (2000 Mar) *** 25 (3) 385-7.
 Journal code: 7613461. ISSN: 0364-3190.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 2000222620
 EM 200005
 ED Entered STN: 20000622
 Last Updated on STN: 20000622

L4 ANSWER 178 OF 473 CANCERLIT on STN
 AN 2000178144 CANCERLIT
 DN 20178144 PubMed ID: 10712238
 TI ERK signaling mediates the induction of inflammatory cytokines by bufalin
 in ***human*** monocytic cells.
 AU Kurosawa M; Numazawa S; Tani Y; Yoshida T
 CS Department of Biochemical Toxicology, School of Pharmaceutical Sciences,
 Showa University, Tokyo 142-8555, Japan.. kuromasa@pharm.showa-u.ac.jp
 SO AMERICAN JOURNAL OF PHYSIOLOGY. CELL PHYSIOLOGY, *** (2000 Mar) *** 278
 (3) C500-8.
 Journal code: 100901225. ISSN: 0363-6143.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 2000457119
 EM 200009
 ED Entered STN: 20001128
 Last Updated on STN: 20001128

L4 ANSWER 179 OF 473 CANCERLIT on STN

DN 20170162 PubMed ID: 10707889
TI N(omega)-nitro-L-arginine decreases resting cytosolic [Ca2+] and enhances
heat stress-induced increase in cytosolic [Ca2+] in ***human*** colon
carcinoma T84 cells.
AU Kiang J G; McClain D E
CS Department of Cellular Injury, Walter Reed Army Institute of Research,
Washington, DC 20307-5100, USA.. Dr. Juliann Kiang@WRSMTP-ccmail.army.mil
SO CHINESE JOURNAL OF PHYSIOLOGY, *** (1999 Sep 30) *** 42 (3) 153-9.
Journal code: 7804502. ISSN: 0304-4920.
CY CHINA (REPUBLIC: 1949-)
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 2000170162
EM 200003
ED Entered STN: 20000515
Last Updated on STN: 20000515

L4 ANSWER 180 OF 473 CANCERLIT on STN
AN 1999198954 CANCERLIT
DN 99198954 PubMed ID: 10100855
TI Unique topology of the internal repeats in the cardiac Na+/Ca2+ exchanger.
AU Iwamoto T; Nakamura T Y; Pan Y; Uehara A; Imanaga I; Shigekawa M
CS Department of Molecular Physiology, National Cardiovascular Center
Research Institute, Suita, Osaka, Japan.
SO FEBS LETTERS, *** (1999 Mar 12) *** 446 (2-3) 264-8.
Journal code: 0155157. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 1999198954
EM 199904
ED Entered STN: 19990519
Last Updated on STN: 19990519

L4 ANSWER 181 OF 473 CANCERLIT on STN
AN 1998281762 CANCERLIT
DN 98281762 PubMed ID: 9620452
TI TGF-beta1 up-regulates the mRNA for the Na+/Ca2+ exchanger in neonatal rat
cardiac myocytes.
AU Carrillo C; Cafferata E G; Genovese J; O'Reilly M; Roberts A B;
Santa-Coloma T A
CS Instituto de Investigaciones Bioquimicas Fundacion Campomar, Buenos Aires,
Argentina.
SO CELLULAR AND MOLECULAR BIOLOGY, *** (1998 May) *** 44 (3) 543-51.
Journal code: 9216789. ISSN: 0145-5680.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 1998281762
EM 199808
ED Entered STN: 19980910
Last Updated on STN: 19980910

L4 ANSWER 182 OF 473 CANCERLIT on STN
AN 1998233514 CANCERLIT
DN 98233514 PubMed ID: 9571987
TI Overexpression of HSP-70 attenuates increases in [Ca2+]i and protects
human epidermoid A-431 cells after chemical hypoxia.
AU Kiang J G; Ding X Z; McClain D E
CS Department of Clinical Physiology, Walter Reed Army Institute of Research,
Washington, DC 20307-5100, USA.
SO TOXICOLOGY AND APPLIED PHARMACOLOGY, *** (1998 Apr) *** 149 (2) 185-94.
Journal code: 0416575. ISSN: 0041-008X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 1998233514
EM 199805
ED Entered STN: 19980610
Last Updated on STN: 19980610

AN 97182154 CANCERLIT
 DN 97182154 PubMed ID: 9030200
 TI Modulation of cytokine production by ***human*** mononuclear cells following impairment of Na, K-ATPase activity.
 AU Foey A D; Crawford A; Hall N D
 CS School of Pharmacy and Pharmacology, University of Bath. Bath Institute for Rheumatic Diseases, UK.
 SO BIOCHIMICA ET BIOPHYSICA ACTA, *** (1997 Jan 10)*** 1355 (1) 43-9.
 Journal code: 0217513. ISSN: 0006-3002.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 97182154
 EM 199703
 ED Entered STN: 19970409
 Last Updated on STN: 19970409

L4 ANSWER 184 OF 473 CANCERLIT on STN
 AN 97175638 CANCERLIT
 DN 97175638 PubMed ID: 9023293
 TI Nitrous oxide enhances Na+/Ca++ exchange in the neuroblastoma cell line SK-N-SH.
 AU Resendes M C; Kalogeros G C; Dixon S J; Philp R B
 CS Department of Pharmacology, The University of Western Ontario, London, Canada.
 SO JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, *** (1997 Feb)*** 280 (2) 795-801.
 Journal code: 0376362. ISSN: 0022-3565.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 97175638
 EM 199703
 ED Entered STN: 19970409
 Last Updated on STN: 19970509

L4 ANSWER 185 OF 473 CANCERLIT on STN
 AN 97073026 CANCERLIT
 DN 97073026 PubMed ID: 8915774
 TI Na+/Ca2+ exchange in rat osteoblast-like UMR 106 cells.
 AU White K E; Gesek F A; Friedman P A
 CS Department of Pharmacology and Toxicology, Dartmouth Medical School, Hanover, New Hampshire, USA.
 NC R01 ES-05860 (NIEHS)
 R01 GM-34399 (NIGMS)
 T32 DK-07301 (NIDDK)
 SO JOURNAL OF BONE AND MINERAL RESEARCH, *** (1996 Nov)*** 11 (11) 1666-75.
 Journal code: 8610640. ISSN: 0884-0431.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 97073026
 EM 199703
 ED Entered STN: 19970409
 Last Updated on STN: 19970509

L4 ANSWER 186 OF 473 CANCERLIT on STN
 AN 96250115 CANCERLIT
 DN 96250115 PubMed ID: 8659866
 TI Na-Ca exchange in circulating blood cells.
 AU Gardner J P; Balasubramanyam M
 CS Department of Pediatrics, University of Medicine and Dentistry-New Jersey Medical School, Newark 07103, USA.
 SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, *** (1996 Apr 15)*** 779 502-14. Ref: 27
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English

OS MEDLINE 96250115
 EM 199607
 ED Entered STN: 19960911
 Last Updated on STN: 19970509

L4 ANSWER 187 OF 473 CANCERLIT on STN
 AN 95370232 CANCERLIT
 DN 95370232 PubMed ID: 7642578
 TI The putative amino-terminal signal peptide of the cloned rat brain Na(+)-Ca2+ exchanger gene (RBE-1) is not mandatory for functional expression.
 AU Furman I; Cook O; Kasir J; Low W; Rahamimoff H
 CS Department of Biochemistry, Hebrew University-Hadassah Medical School, Jerusalem, Israel.
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, *** (1995 Aug 11) *** 270 (32) 19120-7.
 Journal code: 2985121R. ISSN: 0021-9258.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 95370232; GENBANK-X68812
 EM 199509
 ED Entered STN: 19951012
 Last Updated on STN: 19970509

L4 ANSWER 188 OF 473 CANCERLIT on STN
 AN 95030379 CANCERLIT
 DN 95030379 PubMed ID: 7943783
 TI Procaine, lidocaine, and hypothermia inhibit calcium paradox in glial cells.
 AU Kim-Lee M H; Stokes B T; McDonald J S
 CS Department of Physiology, Ohio State University, Columbus 43210.
 NC NS10165 (NINDS)
 SO ANESTHESIA AND ANALGESIA, *** (1994 Oct) *** 79 (4) 728-33.
 Journal code: 1310650. ISSN: 0003-2999.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Abridged Index Medicus Journals; Priority Journals
 OS MEDLINE 95030379
 EM 199411
 ED Entered STN: 19960517
 Last Updated on STN: 19970509

L4 ANSWER 189 OF 473 CANCERLIT on STN
 AN 94323970 CANCERLIT
 DN 94323970 PubMed ID: 7519371
 TI Sodium cyanide increases cytosolic free calcium: evidence for activation of the reversed mode of the Na+/Ca2+ exchanger and Ca2+ mobilization from inositol trisphosphate-insensitive pools.
 AU Kiang J G; Smallridge R C
 CS Department of Clinical Physiology, Walter Reed Army Institute of Research, Washington, DC 20307-5100.
 SO TOXICOLOGY AND APPLIED PHARMACOLOGY, *** (1994 Aug) *** 127 (2) 173-81.
 Journal code: 0416575. ISSN: 0041-008X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 94323970
 EM 199408
 ED Entered STN: 19941107
 Last Updated on STN: 19970509

L4 ANSWER 190 OF 473 CANCERLIT on STN
 AN 92388658 CANCERLIT
 DN 92388658 PubMed ID: 1387665
 TI A Na(+)-dependent Ca2+ exchanger generates the sustained increase in intracellular Ca2+ required for T cell activation.
 AU Wacholtz M C; Cragoe E J Jr; Lipsky P E
 CS Harold C. Simmons Arthritis Research Center, Department of Internal Medicine, University of Texas Southwestern Medical Center, Dallas 75235.
 NC AR09989 (NIAMS)
 SO JOURNAL OF IMMUNOLOGY, *** (1992 Sep 15) *** 149 (6) 1912-20.
 Journal code: 2985117R. ISSN: 0022-1767.

DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Abridged Index Medicus Journals; Priority Journals
 OS MEDLINE 92388658
 EM 199210
 ED Entered STN: 19990618
 Last Updated on STN: 19990618

L4 ANSWER 191 OF 473 CANCERLIT on STN
 AN 92343724 CANCERLIT
 DN 92343724 PubMed ID: 1636682
 TI Heat shock increases cytosolic free Ca²⁺ concentration via Na(+)-Ca²⁺ exchange in ***human*** epidermoid A 431 cells.
 AU Kiang J G; Koenig M L; Smallridge R C
 CS Department of Clinical Physiology, Walter Reed Army Institute of Research, Washington, DC 20307-5100.
 SO AMERICAN JOURNAL OF PHYSIOLOGY, *** (1992 Jul)*** 263 (1 Pt 1) C30-8.
 Journal code: 0370511. ISSN: 0002-9513.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 92343724
 EM 199208
 ED Entered STN: 19941107
 Last Updated on STN: 19970509

L4 ANSWER 192 OF 473 CANCERLIT on STN
 AN 92175913 CANCERLIT
 DN 92175913 PubMed ID: 1531810
 TI Reperfusion paradox: a novel mode of glial cell injury.
 AU Kim-Lee M H; Stokes B T; Yates A J
 CS Department of Physiology, Ohio State University, Columbus 43210.
 NC NS10165 (NINDS)
 SO GLIA, *** (1992)*** 5 (1) 56-64.
 Journal code: 8806785. ISSN: 0894-1491.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 92175913
 EM 199204
 ED Entered STN: 19941107
 Last Updated on STN: 19970509

L4 ANSWER 193 OF 473 CANCERLIT on STN
 AN 87157179 CANCERLIT
 DN 87157179 PubMed ID: 3828108
 TI Correlations between the 44D7 antigenic complex and the plasma membrane Na⁺-Ca²⁺ exchanger.
 AU Letarte M; Quackenbush E J; Baumal R; Michalak M
 SO BIOCHEMISTRY AND CELL BIOLOGY, *** (1986 Nov)*** 64 (11) 1160-9.
 Journal code: 8606068. ISSN: 0829-8211.
 CY Canada
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS MEDLINE; Priority Journals
 OS MEDLINE 87157179
 EM 198705
 ED Entered STN: 19941107
 Last Updated on STN: 19970509

L4 ANSWER 194 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:816901 CAPLUS
 DN 135:353862
 TI Protein and cDNA sequences of ***human*** sodium-calcium exchanger protein sequence homolog, and uses thereof in therapy, diagnosis, and drug screening
 IN Wilm, Claudia
 PA Merck Patent G.m.b.H., Germany
 SO PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

PI WO 2001083744 A2 20011108 WO 2001-EP4886 20010430 <--
 WO 2001083744 A3 20020418
 W: CA, JP, US
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
 PT, SE, TR
 EP 1282706 A2 20030212 EP 2001-949305 20010430
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI, CY, TR
 JP 2003531611 T2 20031028 JP 2001-580351 20010430
 US 2003096312 A1 20030522 US 2002-275116 20021101
 PRAI EP 2000-109080 A 20000502
 WO 2001-EP4886 W 20010430

L4 ANSWER 195 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:587549 CAPLUS
 DN 135:301474
 TI Targeted inactivation of the ***sodium*** - ***calcium***
 exchanger (Ncx1) results in the lack of a heartbeat and abnormal
 myofibrillar organization
 AU Koushik, Srinagesh V.; Wang, Jian; Rogers, Rhonda; Moskophidis, Demetrius;
 Lambert, Nevin A.; Creazzo, Tony L.; Conway, Simon J.
 CS Institute of Molecular Medicine and Genetics, Medical College of Georgia,
 Augusta, GA, USA
 SO FASEB Journal (***2001***), 15(7), 1209-1211, 10.1096/fj.00-0696fje
 CODEN: FAJOEC; ISSN: 0892-6638
 PB Federation of American Societies for Experimental Biology
 DT Journal
 LA English
 RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 196 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:194433 CAPLUS
 DN 135:135328
 TI Functional properties of failing ***human*** ventricular myocytes
 AU Houser, Steven R.; Piacentino, Valentino, III; Mattiello, Julian; Weisser,
 Jutta; Gaughan, John P.
 CS Cardiovascular Research Group, Temple University School of Medicine,
 Philadelphia, PA, 19140, USA
 SO Trends in Cardiovascular Medicine (***2001***), Volume Date 2000,
 10(3), 101-107
 CODEN: TCMDEQ; ISSN: 1050-1738
 PB Elsevier Science Inc.
 DT Journal; General Review
 LA English
 RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 197 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:160000 CAPLUS
 DN 135:253329
 TI A polymorphic GT repeat from the ***human*** cardiac Na+Ca2+ exchanger
 intron 2 activates splicing
 AU Gabellini, Nadia
 CS Department of Biological Chemistry, University of Padova, Padua, 35121,
 Italy
 SO European Journal of Biochemistry (***2001***), 268(4), 1076-1083
 CODEN: EJBCAI; ISSN: 0014-2956
 PB Blackwell Science Ltd.
 DT Journal
 LA English
 RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 198 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:105893 CAPLUS
 DN 135:148088
 TI Isolation and characterization of Na+/Ca2+ exchanger gene and splicing
 isoforms in mice
 AU Wakimoto, Koji; Kuro-o, Makoto; Yanaka, Noriyuki; Omori, Kenji; Komuro,
 Issei; Imai, Yuji; Nabeshima, Yo-Ichi
 CS Advanced Medical Research Department, Tanabe Seiyaku Co. Ltd., Osaka,
 532-8505, Japan
 SO DNA Sequence (***2000***), 11(1-2), 75-81

PB Harwood Academic Publishers
DT Journal
LA English
RE.CNT 22

THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 199 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:744138 CAPLUS
DN 135:71985
TI Transcriptional control of the Na⁺/Ca²⁺ exchanger
AU Gabellini, Nadia; Zatti, Alessandra; Carafoli, Ernesto
CS Department of Biological Chemistry, Padua, 5121, Italy
SO International Congress Series (***2000***), 1208(Control and Diseases of Sodium Dependent Transport Proteins and Ion Channels), 69-72
CODEN: EXMDA4; ISSN: 0531-5131
PB Elsevier Science B.V.
DT Journal
LA English

RE.CNT 8
THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 200 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:744129 CAPLUS
DN 134:39966
TI The mechanism of induction of THP-1 cell differentiation by bufalin, a potent Na⁺,K⁺-ATPase inhibitor
AU Kurosawa, Masahiro; Tani, Yoshihiro; Numazawa, Satoshi; Yoshida, Takemi
CS Department of Biochemical Toxicology, School of Pharmaceutical Sciences, Showa University, Tokyo, 142-8555, Japan
SO International Congress Series (***2000***), 1208(Control and Diseases of Sodium Dependent Transport Proteins and Ion Channels), 35-37
CODEN: EXMDA4; ISSN: 0531-5131
PB Elsevier Science B.V.
DT Journal
LA English

RE.CNT 2
THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 201 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:727998 CAPLUS
DN 134:16007
TI Impaired contractile performance of cultured rabbit ventricular myocytes after adenoviral gene transfer of Na⁺-Ca²⁺ exchanger
AU Schillinger, Wolfgang; Janssen, Paul M. L.; Emami, Shahriyar; Henderson, Scott A.; Ross, Robert S.; Teucher, Nils; Zeitz, Oliver; Philipson, Kenneth D.; Prestle, Jurgen; Hasenfuss, Gerd
CS Zentrum Innere Medizin, Abteilung Kardiologie und Pneumologie, Universitat Göttingen, Göttingen, 37075, Germany
SO Circulation Research (***2000***), 87(7), 581-587
CODEN: CIRUAL; ISSN: 0009-7330
PB Lippincott Williams & Wilkins
DT Journal
LA English

RE.CNT 23
THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 202 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:555324 CAPLUS
DN 134:40417
TI Is myocardial Na⁺/Ca²⁺ exchanger transcription a marker for different stages of myocardial dysfunction? Quantitative PCR of the messenger RNA in endomyocardial biopsies of patients with heart failure
AU Piper, Cornelia; Bilger, Johannes; Henrichs, Eva-Maria; Schultheiss, Heinz-Peter; Horstkotte, Dieter; Doerner, Andrea
CS Department of Cardiology, Heart Center North Rhine-Westphalia, University Hospital of the Ruhr University of Bochum, Bad Oeynhausen, Germany
SO Journal of the American College of Cardiology (***2000***), 36(1), 233-241
CODEN: JACCDI; ISSN: 0735-1097
PB Elsevier Science Inc.
DT Journal
LA English

RE.CNT 40
THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 2000:112627 CAPLUS
DN 132:291544
TI Gene expression of Na⁺/Ca²⁺ exchanger during development in ***human*** heart
AU Qu, Y.; Ghatpande, A.; El-Sherif, N.; Boutjdir, M.
CS Department of Medicine, Cardiology Division, V.A. Medical Center and SUNY Health Science Center, Brooklyn, NY, USA
SO Cardiovascular Research (***2000***), 45(4), 866-873
CODEN: CVREAU; ISSN: 0008-6363
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 204 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:172048 CAPLUS
DN 130:279658
TI Functional expression of the ***human*** cardiac Na⁺/Ca²⁺ exchanger in Sf9 cells: rapid and specific Ni²⁺ transport
AU Egger, M.; Ruknudin, A.; Lipp, P.; Kofuji, P.; Lederer, W. J.; Schulze, D. H.; Niggli, E.
CS Department of Physiology, University of Bern, Bern, CH-3012, Switz.
SO Cell Calcium (***1999***), 25(1), 9-17
CODEN: CECADV; ISSN: 0143-4160
PB Churchill Livingstone
DT Journal
LA English
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 205 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:169628 CAPLUS
DN 130:309994
TI The sarcoplasmic reticulum and the Na⁺/Ca²⁺ exchanger both contribute to the Ca²⁺ transient of failing ***human*** ventricular myocytes
AU Dipla, Konstantina; Mattiello, Julian A.; Margulies, Kenneth B.; Jeevanandam, Valluvan; Houser, Steven R.
CS Temple University School of Medicine Department of Physiology, Philadelphia, PA, 19140, USA
SO Circulation Research (***1999***), 84(4), 435-444
CODEN: CIRUAL; ISSN: 0009-7330
PB Lippincott Williams & Wilkins
DT Journal
LA English
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 206 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:492909 CAPLUS
DN 129:200994
TI Ionic mechanisms underlying ***human*** atrial action potential properties: insights from a mathematical model
AU Courtemanche, Marc; Ramirez, Rafael J.; Nattel, Stanley
CS Research Center, Montreal Heart Institute, Montreal, QC, H1T 1C8, Can.
SO American Journal of Physiology (***1998***), 275(1, Pt. 2), H301-H321
CODEN: AJPHAP; ISSN: 0002-9513
PB American Physiological Society
DT Journal
LA English
RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 207 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:704016 CAPLUS
DN 127:344428
TI Molecular cloning of the ***human*** brain Na⁺/Ca²⁺ exchanger and study of its isoform expression in rat brain, normal ***human*** brain, and ***human*** brain with Alzheimer's pathology (***sodium*** / ***calcium*** ***exchanger***)
AU Yu, Li
CS Ohio Univ., Athens, OH, USA
SO (***1997***) 154 pp. Avail.: UMI, Order No. DA9736912
From: Diss. Abstr. Int., B 1997, 58(6), 2894
DT Dissertation

L4 ANSWER 208 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1997:567680 CAPLUS
 DN 127:246561
 TI Alzheimer's amyloid-beta peptide inhibits sodium/calcium exchange measured
 in rat and ***human*** brain plasma membrane vesicles
 AU Wu, A.; Derrico, C. A.; Hatem, L.; Colvin, R. A.
 CS Department of Biological Sciences, Program in Neurobiology, Ohio
 University College of Osteopathic Medicine, Athens, OH, 45701, USA
 SO Neuroscience (Oxford) (***1997***), 80(3), 675-684
 CODEN: NRSCDN; ISSN: 0306-4522
 PB Elsevier
 DT Journal
 LA English

L4 ANSWER 209 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:432909 CAPLUS
 DN 125:138943
 TI Role of the cardiac sarcolemmal Na⁺-Ca²⁺ exchanger in end-stage
 human heart failure
 AU Reinecke, Hans; Studer, Roland; Vetter, Roland; Just, Hanjoerg; Holtz,
 Juergen; Drexler, Helmut
 CS Cardiology and Angiology Internal Medicine III, University of Freiburg,
 Freiburg, D-79106, Germany
 SO Annals of the New York Academy of Sciences (***1996***),
 779(Sodium-Calcium Exchange), 543-545
 CODEN: ANYAA9; ISSN: 0077-8923
 PB New York Academy of Sciences
 DT Journal
 LA English

L4 ANSWER 210 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:432906 CAPLUS
 DN 125:111719
 TI Functional relevance of an enhanced expression of the Na⁺-Ca²⁺ exchanger
 in the failing ***human*** heart
 AU Flesch, M.; Puetz, F.; Schwinger, R. H. G.; Boehm, M.
 CS Clinic III for Internal Medicine, University of Cologne, Cologne, 50924,
 Germany
 SO Annals of the New York Academy of Sciences (***1996***),
 779(Sodium-Calcium Exchange), 539-542
 CODEN: ANYAA9; ISSN: 0077-8923
 PB New York Academy of Sciences
 DT Journal
 LA English

L4 ANSWER 211 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:276654 CAPLUS
 DN 124:339337
 TI Relationship between myocardial function and expression of calcium cycling
 proteins in nonfailing and failing ***human*** myocardium
 AU Hasenfuss, Gerd; Reinecke, Hans; Studer, Roland; Pieske, Burkert; Meyer,
 Markus; Holtz, Juergen; Holubarsch, Christian; Drexler, Helmut; Just,
 Hanjoerg
 CS Medizinische Klinik III, Universitat Freiburg, Freiburg/Br., 79106,
 Germany
 SO Developments in Cardiovascular Medicine (***1995***), 169(Heart
 Hypertrophy and Failure), 103-116
 CODEN: DCMEDM; ISSN: 0166-9842
 PB Kluwer
 DT Journal; General Review
 LA English

L4 ANSWER 212 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:209265 CAPLUS
 DN 124:257323
 TI Cardiac Na⁺/Ca²⁺ exchange activity in patients with end-stage heart
 failure
 AU Reinecke, Hans; Studer, Roland; Vetter, Roland; Holtz, Juergen; Drexler,
 Helmut
 CS Innere Medizin III, Kardiologie und Angiologie, Universitätsklinik
 Freiburg, Freiburg, 79106, Germany
 SO Cardiovascular Research (***1996***), 31(1), 48-54
 CODEN: CVREAU; ISSN: 0008-6363
 PB Elsevier

LA English

L4 ANSWER 213 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1995:450999 CAPLUS
 DN 122:210972
 TI The mode of action of exogenous gangliosides on cytosolic calcium of cultured ***human*** hepatoma cells
 AU Cui, Wen; Liu, Yinkun; Zhang, Xiaying; Song, Jiayi; Chen, Ruigun
 CS Sch. Basic Med. Sci., Shanghai Med. Univ., Shanghai, 200032, Peop. Rep. China
 SO Shengwu Huaxue Yu Shengwu Wuli Xuebao (***1994***), 26(5), 499-503
 CODEN: SHWPAU; ISSN: 0582-9879
 PB Shanghai Kexue Jishu Chubanshe
 DT Journal
 LA Chinese

L4 ANSWER 214 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1994:530939 CAPLUS
 DN 121:130939
 TI Functional expression of ***human*** renal Na⁺/Ca²⁺ exchanger in insect cells
 AU Loo, Tip W.; Clarke, David M.
 CS Department of Medicine, University of Toronto, Toronto, ON, M5S 1A8, Can.
 SO American Journal of Physiology (***1994***), 267(1, Pt. 2), F70-F74
 CODEN: AJPHAP; ISSN: 0002-9513
 DT Journal
 LA English

L4 ANSWER 215 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1994:2857 CAPLUS
 DN 120:2857
 TI Molecular and cellular biology of plasma membrane calcium ATPase
 AU Carafoli, Ernesto; Guerini, Danilo
 CS Inst. Biochem., Swiss Fed. Institute of Technology, Zurich, CH-8092, Switz.
 SO Trends in Cardiovascular Medicine (***1993***), 3(5), 177-84
 CODEN: TCMDEQ; ISSN: 1050-1738
 DT Journal; General Review
 LA English

L4 ANSWER 216 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1993:210050 CAPLUS
 DN 118:210050
 TI Potassium-dependent sodium/calcium exchange in ***human*** platelets
 AU Kimura, Masayuki; Aviv, Abraham; Reeves, John P.
 CS New Jersey Med. Sch., Univ. Med. Dent. New Jersey, Newark, NJ, 07103, USA
 SO Journal of Biological Chemistry (***1993***), 268(10), 6874-7
 CODEN: JBCHA3; ISSN: 0021-9258
 DT Journal
 LA English

L4 ANSWER 217 OF 473 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1992:211743 CAPLUS
 DN 116:211743
 TI Calcium extrusion by the ***sodium*** - ***calcium*** ***exchanger*** of the ***human*** platelet
 AU Haynes, Duncan H.; Valant, Peter A.; Adjei, Philip N.
 CS Sch. Med., Univ. Miami, Miami, FL, 33101, USA
 SO Annals of the New York Academy of Sciences (***1991***), 639(Sodium-Calcium Exch.), 592-603
 CODEN: ANYAA9; ISSN: 0077-8923
 DT Journal
 LA English

L4 ANSWER 218 OF 473 DISSABS COPYRIGHT (C) 2004 ProQuest Information and Learning Company; All Rights Reserved on STN
 AN 2001:56264 DISSABS Order Number: AAI3004657
 TI Role of annexin V and VI in the ***human*** heart
 AU Matteo D'Avenia, Rosalia Gerarda [Ph.D.]; Moravec, Christine S. [adviser]
 CS Cleveland State University (0466)
 SO Dissertation Abstracts International, (***2001***) Vol. 62, No. 2B, p. 703. Order No.: AAI3004657. 114 pages.
 ISBN: 0-493-13605-3.
 DT Dissertation
 FS DAI

L4 ANSWER 219 OF 473 DISSABS COPYRIGHT (C) 2004 ProQuest Information and
Learning Company; All Rights Reserved on STN
AN 97:71556 DISSABS Order Number: AAR9736912
TI MOLECULAR CLONING OF THE ***HUMAN*** BRAIN NA+/CA(2+) EXCHANGER AND
STUDY OF ITS ISOFORM EXPRESSION IN RAT BRAIN, NORMAL ***HUMAN***
BRAIN, AND ***HUMAN*** BRAIN WITH ALZHEIMER'S PATHOLOGY (
SODIUM / ***CALCIUM*** ***EXCHANGER***)
AU YU, LI [PH.D.]; COLVIN, ROBERT ALAN [advisor]
CS OHIO UNIVERSITY (0167)
SO Dissertation Abstracts International, (***1997***) Vol. 58, No. 6B, p.
2894. Order No.: AAR9736912. 154 pages.
DT Dissertation
FS DAI
LA English
ED Entered STN: 19971104
Last Updated on STN: 19971104

L4 ANSWER 220 OF 473 DISSABS COPYRIGHT (C) 2004 ProQuest Information and
Learning Company; All Rights Reserved on STN
AN 94:9773 DISSABS Order Number: AAR9406113
TI MOLECULAR CHARACTERIZATION OF THE PLASMA MEMBRANE ***SODIUM*** /
CALCIUM ***EXCHANGER*** (***SODIUM*** ***CALCIUM***
EXCHANGER)
AU KOFUJI, PAULO [PH.D.]; LEDERER, W. J. [advisor]
CS UNIVERSITY OF MARYLAND AT BALTIMORE (0373)
SO Dissertation Abstracts International, (***1993***) Vol. 54, No. 9B, p.
4548. Order No.: AAR9406113. 154 pages.
DT Dissertation
FS DAI
LA English
ED Entered STN: 19940218
Last Updated on STN: 19940218

L4 ANSWER 221 OF 473 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-27947 DRUGU P
TI Inotropic effects of propofol on ***human*** right atrial trabeculae.
AU de Ruijter W; van Klarenbosch J; Stienen G J; de Lange J J
CS Univ.Amsterdam-Free
LO Amsterdam, Neth.
SO Anesth.Analg. (90, No. 2, Suppl., S398, 2000)
CODEN: AACRAT ISSN: 0003-2999
AV University Hospital Vrije Universiteit, Amsterdam, Netherlands.
LA English
DT Journal
FA AB; LA; CT
FS Literature

L4 ANSWER 222 OF 473 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-47681 DRUGU T
TI Increased sensitivity of ***human*** heart to inotropic stimulation
with Na channel activator or cardiac glycosides associated with decreased
expression of sodium pump isoforms.
AU McDonough A A; Wang J; Frank K; Muller Ehmsen J; Schwinger R H G
CS Univ.Southern-California; Univ.Cologne
LO Los Angeles, Cal., USA; Cologne, Ger.
SO Circulation (94, No. 8, Suppl., I24, 1996)
CODEN: CIRCAZ ISSN: 0009-7322
AV University of Southern California, Los Angeles, CA, U.S.A.
LA English
DT Journal
FA AB; LA; CT
FS Literature

L4 ANSWER 223 OF 473 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1995-14132 DRUGU T P
TI Clinical and in vivo antiarrhythmic potential of sodium-hydrogen exchange
inhibitors.
AU Duff H J
CS Univ.Calgary
LO Calgary, Alb., Can.
SO Cardiovasc.Res. (29, No. 2, 189-93, 1995) 2 Tab. 46 Ref.
CODEN: CVREAU ISSN: 0008-6363
AV Cardiovascular Research Group, University of Calgary, 3330 Hospital Drive
NW, Calgary, Alberta, Canada T2N 4N1.

DT Journal
FA AB; LA; CT
FS Literature

L4 ANSWER 224 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
RESERVED. on STN
AN 2001046987 EMBASE
TI Functional properties of failing ***human*** ventricular myocytes.
AU Houser S.R.; Piacentino III V.; Mattiello J.; Weisser J.; Gaughan J.P.
CS Prof. S.R. Houser, Cardiovascular Research Group, Molecular/Cellular
Cardiology Lab., Temple University School of Medicine, 3400 North Broad
Street, Philadelphia, PA 19140, United States. srhouser@unix.temple.edu
SO Trends in Cardiovascular Medicine, (2000) 10/3 (101-107).
Refs: 29
ISSN: 1050-1738 CODEN: TCMDEQ
PUI S 1050-1738(00)00057-8
CY United States
DT Journal; General Review
FS 018 Cardiovascular Diseases and Cardiovascular Surgery
021 Developmental Biology and Teratology
022 Human Genetics
029 Clinical Biochemistry
037 Drug Literature Index
005 General Pathology and Pathological Anatomy
LA English
SL English

L4 ANSWER 225 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
RESERVED. on STN
AN 2000226411 EMBASE
TI Mechanisms of hydrogen peroxide-induced calcium dysregulation in PC12
cells.
AU Wang H.; Joseph J.A.
CS Dr. H. Wang, Department of Neurology, Children's Hospital, Enders 3, 300
Longwood Avenue, Boston, MA 02115, United States
SO Free Radical Biology and Medicine, (15 Apr 2000) 28/8 (1222-1231).
Refs: 50
ISSN: 0891-5849 CODEN: FRBMEH
PUI S 0891-5849(00)00241-0
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
LA English
SL English

L4 ANSWER 226 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
RESERVED. on STN
AN 1998160329 EMBASE
TI Calcium channels in cardiac hypertrophy and heart failure.
AU Shorofsky S.R.; Balke C.W.; Gwathmey J.K.
CS S.R. Shorofsky, Univ. of Maryland School of Medicine, Division of
Cardiology, 22 South Greene Street, Baltimore, MD 21201, United States
SO Heart Failure Reviews, (1998) 2/3 (163-171).
Refs: 104
ISSN: 1382-4147 CODEN: HFREFC
CY Netherlands
DT Journal; General Review
FS 018 Cardiovascular Diseases and Cardiovascular Surgery
LA English
SL English

L4 ANSWER 227 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
RESERVED. on STN
AN 94169689 EMBASE
DN 1994169689
TI Sodium-calcium exchange in neonatal myocardium: Reversible inhibition by
halothane.
AU Baum V.C.; Wetzel G.T.
CS Department of Anesthesiology, UCLA Medical Center, Los Angeles, CA
90024-1778, United States
SO Anesthesia and Analgesia, (1994) 78/6 (1105-1109).

CY United States
 DT Journal; Article
 FS 024 Anesthesiology
 030 Pharmacology
 037 Drug Literature Index
 LA English
 SL English

L4 ANSWER 228 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
 RESERVED. on STN
 AN 93034622 EMBASE
 DN 1993034622
 TI [Biochemical alterations and disturbances of the excitation-contraction
 coupling in congestive heart failure].
 BIOCHEMISCHE VERÄNDERUNGEN UND STÖRUNGEN DER ELEKTROMECHANISCHEN KOPPLUNG
 BEI DER CHRONISCHEN HERZINSUFFIZIENZ.
 AU Holubarsch C.
 CS Medizinische Universitätsklinik, Hugstetter Strasse 55, W-7800 Freiburg,
 Germany
 SO Zeitschrift für Kardiologie, (1992) 81/SUPPL. 4 (17-21).
 ISSN: 0300-5860 CODEN: ZKRDX

CY Germany
 DT Journal; Conference Article
 FS 006 Internal Medicine
 018 Cardiovascular Diseases and Cardiovascular Surgery
 037 Drug Literature Index
 LA German
 SL English; German

L4 ANSWER 229 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
 RESERVED. on STN
 AN 85205701 EMBASE
 DN 1985205701
 TI Bartter's syndrome: A unifying hypothesis.
 AU Garrick R.; Ziyadeh F.N.; Jorkasky D.; Goldfarb S.
 CS Renal-Electrolyte Section, Department of Medicine, Hospital of the
 University of Pennsylvania, Philadelphia, PA 19104, United States
 SO American Journal of Nephrology, (1985) 5/5 (379-384).
 CODEN: AJNED
 CY United States
 DT Journal
 FS 028 Urology and Nephrology
 003 Endocrinology
 005 General Pathology and Pathological Anatomy
 LA English

L4 ANSWER 230 OF 473 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS
 RESERVED. on STN
 AN 84094778 EMBASE
 DN 1984094778
 TI Regulation of calcium transport in cardiac cells.
 AU Shamoo A.E.; Ambudkar I.S.
 CS Membrane Biochemistry Research Laboratory, Department of Biological
 Chemistry, School of Medicine, University of Maryland, Baltimore, MD
 21201, United States
 SO Canadian Journal of Physiology and Pharmacology, (1984) 62/1 (9-22).
 CODEN: CJPPA3
 CY Canada
 DT Journal
 FS 037 Drug Literature Index
 002 Physiology
 030 Pharmacology
 018 Cardiovascular Diseases and Cardiovascular Surgery
 029 Clinical Biochemistry
 LA English
 SL French

L4 ANSWER 231 OF 473 Elsevier BIOBASE COPYRIGHT 2004 Elsevier Science B.V.
 on STN
 AN 1999203438 ESBIODASE
 TI Sodium/calcium exchange contributes to contraction and relaxation in
 failed ***human*** ventricular myocytes
 AU Gaughan J.P.; Furukawa S.; Jeevanandam V.; Hefner C.A.; Kubo H.;
 Margulies K.B.; McGowan B.S.; Mattiello J.A.; DiPaola K.; Piacentino III
 V.; Li S.; Houser S.R.

3420 North Broad Street, Philadelphia, PA 19140, United States.
E-mail: jgaughan@debjohn@pond.com

SO American Journal of Physiology - Heart and Circulatory Physiology, (***1999***), 277/2 46-2 (H714-H724), 30 reference(s)
CODEN: AJPPDI ISSN: 0363-6135

DT Journal; Article
CY United States
LA English
SL English

L4 ANSWER 232 OF 473 Elsevier BIOBASE COPYRIGHT 2004 Elsevier Science B.V. on STN

AN 1998189833 ESBIOBASE
TI Ionic mechanisms underlying ***human*** atrial action potential properties: Insights from a mathematical model
AU Courtemanche M.; Ramirez R.J.; Nattel S.
CS M. Courtemanche, Research Center, Montreal Heart Institute, 5000 E. Belanger St., Montreal, Que. H1T 1C8, Canada.

SO American Journal of Physiology - Heart and Circulatory Physiology, (***1998***), 275/1 44-1 (H301-H321), 62 reference(s)
CODEN: AJPPDI ISSN: 0363-6135

DT Journal; Article
CY United States
LA English
SL English

L4 ANSWER 233 OF 473 Elsevier BIOBASE COPYRIGHT 2004 Elsevier Science B.V. on STN

AN 1997180450 ESBIOBASE
TI Na.sup.+ /Ca.sup.2.sup.+ exchanger in Drosophila: Cloning, expression, and transport differences
AU Ruknudin A.; Valdivia C.; Kofuji P.; Lederer W.J.; Schulze D.H.
CS D.H. Schulze, Dept. of Microbiology and Immunology, 655 W. Baltimore St., Baltimore, MD 21201, United States.

SO American Journal of Physiology - Cell Physiology, (***1997***), 273/1 42-1 (C257-C265), 34 reference(s)
CODEN: AJPCDD ISSN: 0363-6143

DT Journal; Article
CY United States
LA English
SL English

L4 ANSWER 234 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): AL627278 GenBank (R)
GenBank ACC. NO. (GBN): AL627278 AL513382
GenBank VERSION (VER): AL627278.1 GI:16504263
CAS REGISTRY NO. (RN): 365924-97-6
SEQUENCE LENGTH (SQL): 258050
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Bacteria
DATE (DATE): 4 Jul 2003
DEFINITION (DEF): Salmonella enterica serovar Typhi (Salmonella typhi) strain CT18, complete chromosome; segment 14/20.

SOURCE: Salmonella enterica subsp. enterica serovar Typhi
ORGANISM (ORGN): Salmonella enterica subsp. enterica serovar Typhi
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Salmonella

NUCLEIC ACID COUNT (NA): 61275 a 71182 c 65531 g 60062 t

COMMENT:
E-mail: parkhill@sanger.ac.uk
Notes:
Details of S. typhi sequencing at the Sanger Centre are available on the World Wide Web.
(URL, http://www.sanger.ac.uk/Projects/S_typhi/).

REFERENCE: 1 (bases 1 to 258050)
AUTHOR (AU): Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, C.; Mungall, K.L.; Bentley, S.D.; Holden, M.T.G.; Sebaihia, M.; Baker, S.; Basham, D.; Brooks, K.; Chillingworth, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar, J.; Feltwell, T.; Hamlin, N.; Haque, A.; Hien, T.T.; Holroyd, S.; Jagels, K.; Krogh, A.; Larsen, T.S.; Leather, S.; Moule, S.; O'Gaora, P.; Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.;

TITLE (TI): Complete genome sequence of a multiple drug resistant
 Salmonella enterica serovar Typhi CT18
 JOURNAL (SO): Nature, 413 (6858), 848-852 (***2001***)
 OTHER SOURCE (OS): CA 136:15814
 REFERENCE: 2 (bases 1 to 258050)
 AUTHOR (AU): Parkhill, J.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (25-OCT-2001) Submitted on behalf of the
 Salmonella sequencing team, Sanger Centre, Wellcome
 Trust Genome Campus, Hinxton, Cambridge CB10 1SA, UK

FEATURES (FEAT):

Feature Key	Location	Qualifier
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CDS	69..1544	/gene="tolC" /note="Similar to Salmonella enteritidis outer membrane protein TolC precursor tolC SW:TOLC-SALEN (Q54001) (491 aa) fasta scores: E(): 0, 99.0% id in 491 aa, and to Escherichia coli outer membrane protein tolC precursor tolC or mtcb or muka or refI SW:TOLC-ECOLI (P02930) (495 aa) fasta scores: E(): 0, 89.7% id in 495 aa Orthologue of E. coli tolC (TOLC-ECOLI); Fasta hit to TOLC-ECOLI (495 aa), 90% identity in 495 aa overlap" /codon-start=1 /transl-table=11 /product="outer membrane protein TolC precursor" /protein-id="CAD07712.1" /db-xref="GI:16504264" /db-xref="GOA:Q8Z3N8" /db-xref="SPTREMBL:Q8Z3N8" /translation="MQMKKLLPILIGLSLGSFST LSQAENLMQVYQQARLSNPFLRKS AADRDAAFEKINEARSPLLPQLGLGADYTYSNKY RDANGINSNETSASLQLTQTLFDM SKWRGLTLQEKAAAGIQDVTYQTDQQTILINTANA YFKVLNAIDVLSYTAQKEAIYRQ LDQTTQRFNVGLVAITDVQNARAQYDTVLANEVT ARNNLDNAVEELRQVTGNYYPELA SLNVEHFKTDKPKAVNALLKEAENRNLSLLQARL SODLAREQIRQAQDGHLPPTLNLT STGISDTSYSGSKTNSAQYDDSNMGQNKIGLNF LPLYQGGMVNSQVKQAQYNFVGAS EQLESAHRSVVQTVRSSFNNINASISSINAYKQA VVSAQSSLDAMEAGYSVGTRTIVD VLDATTTLYDAKQQLANARYTYLINQLNIKYALG TLNEQDLLALNSTLGKPIPTSPES VAPETPEQDAAADGYNHAAPAVQPTAARANSN NGNPFRRH" /gene="STY3365" /note="Orthologue of E. coli ygiB (YGIB-ECOLI); Fasta hit to YGIB-ECOLI (234 aa), 97% identity in 223 aa overlap. Contains a possible N-terminal signal sequence." /codon-start=1 /transl-table=11 /product="possible lipoprotein" /protein-id="CAD07713.1" /db-xref="GI:16504265"
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CDS 2434..3597

gene complement(3659..4489)
CDS complement(3659..4489)

gene 4588..5361
CDS 4588..5361

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/note="Fasta hit to YJFC-ECOLI
(387 aa), 50% identity in 392 aa
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(YGIC-ECOLI); Fasta hit to
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FTDLQDQVIANLFKLYPWEFMLEMFSTKLEDAG
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/note="Orthologue of E. coli ygiD
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PNADIPMVQLSVDSTKPAAWHFEM
GRKLATLRDEGVMLVASGNVVHNLRTVRWHGDNI
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/note="Orthologue of E. coli ygiE
(YGIE-ECOLI); Fasta hit to
YGIE-ECOLI (257 aa), 93% identity
in 257 aa overlap. Contains
multiple possible membrane
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/transl-table=11

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CDS 6004..7800

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GSIKRTAILLTGLISLHNFPEGIATFVTASSNLE
LGFGIALAVALHNIPEGLAVAGPV
YAATGSKRTAIFWAGISGMAEILGGVLAWLILGS
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KFANNVTVEYKENGKAMKDDYVVQTSIAIVNHYMD
NRSISDLQQTQVIKVAPGFEDRLY
LVNTHFTFTPOGAEFHWHGEKDKNAGILDAGPAGG
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QHWYEFDDMMGQILADHKLPRGFLD
ASHESIETVNGTVLLRVGKRDRYRKEDGIHVHTIR
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MRDALLGALDAGAVCVNVDLAHAGQQAKLEPDTP
YGDALGVGAGRNVAVNSIAYDAK
DDSIILSSRHQGIKIGRDKQVKWILAPSKGWNK
QLASKLLKPVDDHKGKPLTCDENGK
CKDTEFDFTYTQHTAWLSSKGTLTTFDNGDGRGL
EQPALPTMKYSRFVEYKIDEKKG
VQQVWEYGKERGYDFYSPITSVVEYQKDRDTMFG
FGGSINLFDVGKPTVGKLNEIDYK
TKEVKVEIDVLSDKPNQTHYRALLVHPTQMFK"

gene 7820..8491
CDS 7820..8491

/gene="dsbA"
/note="synonym: STY3371"
/gene="dsbA"
/note="Similar to Enterobacter
amnigenus disulfide isomerase dsbA
TR:Q9XDP1 (EMBL:AF012826) (222 aa)
fasta scores: E(): 0, 90.1% id in
222 aa"

/codon-start=1
/transl-table=11
/product="disulfide isomerase"
/protein-id="CAD07718.1"
/db-xref="GI:16504270"
/db-xref="GOA:Q8Z3N5"
/db-xref="SPTREMBL:Q8Z3N5"
/translation="MSSKWITSLFKSVVLTAALV
TPFAASAFTEGTDYMVLEKPIPN
DKTLIKVFSYACPFYKYDKAVTGVPVSDKVADLV
TFTPFHLETKGEYKQASEVFAVL
IAKDKAAGISLFDKASQFKKAKFAWYTAYHDKKE
RWSGKDPAAFIKTGLDAAGMSQA
DFEAALKDPAVQETLEKWKAAAYDVAKIQGVPAVY

misc-feature	7847..8488	/gene="dsbA" /note="Pfam match to entry PF01323 DSBA, DSBA oxidoreductase, score 12.90, E-value 1.9e-07"
gene	8506..9183	/gene="dsbB"
CDS	8506..9183	/note="synonym: STY3372" /gene="dsbB" /note="Similar to Enterobacter amnigenus disulfide isomerase dsbB TR:Q9XDP0 (EMBL:AF012826) (221 aa) fasta scores: E(): 0, 89.2% id in 158 aa. The Enterobacter amnigenus gene appears to contain a frameshift after codon 161; this gene is the same as the S. typhimurium gene" /codon-start=1 /transl-table=11 /product="disulfide isomerase" /protein-id="CAD07719.1" /db-xref="GI:16504271" /db-xref="GOA:Q8XEK0" /db-xref="SWISS-PROT:Q8XEK0" /translation="MDFIKGLWRDLRARPVDTLV RWQEQRFLLWLLMAIAMGGLIILAH SFFQIYLYMAPCEQCQVYIRYAMFVMVIGGVIAAI NPKNIVLKLIGCIAAFYGSIMGIK FSIKLNGIHHAVHNADPDSLFGVQGCSTDPTFPF NLPLAEWAPEWFKPTGDCGYDAPI VPDGVTLLSSVQQWFVDLYQQSEGWYLLPPWHFMN MAQACMLAFLGLCLILLLVMSGAWA LKLARGK"
gene	complement(9354..10007)	/gene="STY3373"
CDS	complement(9354..10007)	/note="synonym: ribB" /gene="STY3373" /note="Orthologue of E. coli ribB (RIBB-ECOLI); Fasta hit to RIBB-ECOLI (217 aa), 97% identity in 217 aa overlap" /codon-start=1 /transl-table=11 /product="3,4-dihydroxy-2-butanone 4-phosphate synthase" /protein-id="CAD07720.1" /db-xref="GI:16504272" /db-xref="GOA:Q8XES0" /db-xref="SPTREMBL:Q8XES0" /translation="MNQTLSSFGTTPFERVELAL DALREGRGVMVLDDRENEGDMI FPAETMTVEQMALTIRHSGSIVCLCITEDRRKQL DLPMMVENNTSAYGTGFTVTIEAA EGVTTGVSAADRVTTVRAAIKDGAKPSDLNRPGH VFPLRAQAGGVLTTRGGHTEATIDL MTLAGFKPAGVLCCLTNDGTMARAPECIAFAGQ HNMAVVTIEDLVAYRQAHERKAS"
misc-feature	complement(9375..9923)	/gene="STY3373" /note="Pfam match to entry PF00926 DHBP-synthase, 3,4-dihydroxy-2-butanone 4-phosphate synthase, score 395.00, E-value 7.2e-115"
gene	10384..10740	/gene="STY3375"
CDS	10384..10740	/gene="STY3375" /note="Similar to Escherichia coli hypothetical 13.8 kDa protein in ribb-glgs intergenic region yqiC SW:YQIC-ECOLI (Q46868) (116 aa) fasta scores: E(): 1.3e-28, 80.7% id in 114 aa Orthologue of E. coli YQIC-ECOLI; Fasta hit to YQIC-ECOLI (116 aa), 81% identity in 114 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein"

gene

complement(10815..11018)
)

CDS

complement(10815..11018)
)

/db-xref="GI:16504273"
/db-xref="SPTREMBL:Q8Z3N4"
/translation="MASTYRTTIRANTYQFRETT
MIDPKKIEQIARQVHESMPKGIRE
FGEDIEKKIROTLQSQLTRLDLVSREEFDVQTQV
LLRTREKLALLEQRLSELEARDKP
EEVKPAPAIPVDPQE"
/gene="STY3376"

/note="synonym: glgS"
/gene="STY3376"

/note="Orthologue of E. coli glgS
(GLGS-ECOLI); Fasta hit to
GLGS-ECOLI (66 aa), 79% identity
in 65 aa overlap"
/codon-start=1
/transl-table=11
/product="glycogen synthesis
protein GlgS"
/protein-id="CAD07722.1"
/db-xref="GI:16504274"
/db-xref="GOA:P58615"
/db-xref="SWISS-PROT:P58615"
/translation="MNNNNVYSLNNFDLARSFA
RMQAEGRPVDIQAVTGNMDEEHRD
WFCKRYALYCQQATQAKKLELEH"
/gene="STY3377"

gene

11282..11902

CDS

11282..11902

/gene="STY3377"
/note="Orthologue of E. coli
P76657; Fasta hit to P76657 (209
aa), 72% identity in 201 aa
overlap. Contains multiple
possible membrane spanning
hydrophobic domains and a possible
N-terminal signal sequence."
/codon-start=1
/transl-table=11
/product="putative membrane
protein"
/protein-id="CAD07723.1"
/db-xref="GI:16504275"
/db-xref="SPTREMBL:Q8Z3N3"
/translation="MTLFAEYNSPYLFAIAFVFF
IGVLEMISLIFGHFLSGALDAHLD
HYDALSSGPAGQALHYLNIGRVPALVVLCLLAGY
FGLFGILIQHGGIMLWQAPLSNLL
LVPLSIVLSVFAVHYSEKILAPWLPREDESSALRE
EEFIGGMAIITGHAAGVAGTPCEGK
FTDKFGQIHYLLLEPEKGKEFKGDKVLIVCRLS
ATRYLAERTFYV"
/gene="STY3378"

gene

11921..13600

CDS

11921..13600

/gene="STY3378"
/note="Orthologue of E. coli
YQIK-ECOLI; Fasta hit to
YQIK-ECOLI (553 aa), 93% identity
in 549 aa overlap. Contains a
possible N-terminal signal
sequence and a possible
coiled-coil region between
residues 345..446"
/codon-start=1
/transl-table=11
/product="putative exported
protein"
/protein-id="CAD07724.1"
/db-xref="GI:16504276"
/db-xref="SPTREMBL:Q8Z3N2"
/translation="MDDVFGILPSWMFTAIVAVI
VLLIIGIIFARLYRRASAEQAFVR
TGLGGQKVVMSGGAIVMPIFHEIIPINMNTLKLE
VSRATVDSLITKDRMRVDVVVAFF
VRVKPSVEGIATSAQTLGQRTLSPEDLRMLVEDK
FVDALRATAAQMTMHELQDTRENF
VQGVQNTVAEDLSKNGLELESVSLTNFNQTSKEH"

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ERNEVEQDVEVAVREKNRDALERKLEIEQQEAFM
TLEQEQQVKTRTAEQNAKIAAFEAF
ERHREAEQTRILAERQIQETEIEREQAVRSRKVE
AEREVRIKEIEQQQVTEIANQTKS
IAIAAKSEQQSQAPEARANDALADAVRAQQNVETT
RQTAEADRAKQVALIAAAQDAETK
AVELTVRAKAEKEAAELQAAAIIEELAEAAARKKGL
AEAEAQRALNDAINVLSDEQTSLK
FKLALLQSLPAVIEKSVEPMKSIDGIKIIQVDGL
NRGATAGDVAAGGANGGNLAEQAL
SAALTYRTQAPLIDSLLEIGIAGGSLKALTTP
VSSATDEINREATIKEQ"
gene      complement(14060..15493 /gene="rfaE"
)
CDS      complement(14060..15493 /note="synonym: STY3379"
)      /gene="rfaE"
      /EC-number="2.7.-.-"
      /note="Highly similar to
      Escherichia coli ADP-heptose
      synthase RfaE SW:RFAE-ECOLI
      (P76658) (477 aa) fasta scores:
      E(): 0, 93.5% id in 476 aa and to
      Salmonella enterica RfaE TR:Q9RFY8
      (EMBL:AF163661) (477 aa) fasta
      scores: E(): 0, 99.4% id in 477
      aa"
      /codon-start=1
      /transl-table=11
      /product="ADP-heptose synthase"
      /protein-id="CAD07725.1"
      /db-xref="GI:16504277"
      /db-xref="GOA:Q8XEW9"
      /db-xref="SPTREMBL:Q8XEW9"
      /translation="MKVNLPAFERAGVMVVGDM
      LDRYWYGPTCRISPEAPVPVVKVN
      TVEERPGGAAENVAMNIASLGANARLVGLTGIDDA
      ARALSKTLAEVNVKCFVSVPTHP
      TITKLRVLSRNQQLIRLDFEEGFEGVDPQPLHER
      INQALGSIGALVLSDYAKGALTSV
      QTMISLARQAGVPVLIDPKGTDFFERYRGATLLTP
      NLSEFEAVAGKCKSEDELVERGMK
      LIADYDLSALLVTRSEQGMTLLQPNKAPLHMPTQ
      AQEVYDVTGAGDTVIGVLAATLAA
      GNTLEEACYFANAAAGVVVGKLGSTVSPIELEN
      AVRGRADTGFGVMTEEEELRQAVAS
      ARKRGEKVMTNGVFDILHAGHVSYLANARKLGD
      RLIVAVNSDASTKRLKGESRPVNP
      LEQRMIVLGALESVDWVVSFEEDTPQRLIAGILP
      DLLVKGGDYKPEEIAGSEEVWANG
      GEVMVLNFEDGCSTTNIKKIQTESEK"
misc-feature complement(14072..14464 /gene="rfaE"
)
misc-feature complement(15173..15343 /note="Pfam match to entry PF01467
)      Cytidylyltransf,
      Cytidylyltransferase, score
      139.30, E-value 7e-38"
      /gene="rfaE"
misc-feature complement(15272..15343 /note="Pfam match to entry PF00294
)      pfkB, pfkB family carbohydrate
      kinase, score 20.00, E-value
      2.3e-05"
      /gene="rfaE"
gene      complement(15541..18384 /note="PS00583 pfkB family of
)      carbohydrate kinases signature 1"
      /gene="STY3380"
CDS      complement(15541..18384 /note="synonym: glnE"
)      /gene="STY3380"
      /note="Orthologue of E. coli glnE
      (GLNE-ECOLI); Fasta hit to
      GLNE-ECOLI (946 aa), 88% identity

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/codon-start=1
/transl-table=11
/product="adenyl-transferase"
/protein-id="CAD07726.1"
/db-xref="GI:16504278"
/db-xref="GOA:Q8Z3N1"
/db-xref="SPTREMBL:Q8Z3N1"
/translation="MTPLSSPLSQYWQTVVERLP
EGFTETSLSAQAKSVLTFSDFALD
SVIAHPEWLAELESASPQADEWRHYAGWLQEALA
GVCDDASLMRELRLFRRRIMVRIA
WAQTLVLVDDETILQQLSHLAETLIVGARDWLYA
ACCREWGTPCNPQGVPPQLLILGM
GKLGGEELNFSSDIDLIFAWPEHGETRGRRELD
NAQFFTRLGQRLIKALDQPTMDGF
VYRVDMRLRPFQDGSGLVLSFAALEDYYQEGRD
WERYAMVKARLMGDNDDAWSRELRL
AMLRPFVFRYIDFSVIQSLRNMKGMIAREVRRL
GLKDNILKLGAGGIREIEFIVQVFQ
LIRGGREPSLQSRSLPTLDAIAALHLLPENDVA
QLRVAYLFLRRLENLLQSINDEQT
QTLPADDLNRARLAWGMKAENWPQLVGELTDHMA
NVRVFNELIGDDEADTPQEEERS
EPWREVVQDALQEDDSTPVLHLADEDRRQVLT
IADFRKELDKRPIGPRGRQVLDQL
MPHLLADVCSREDAAVTLRITPLLAGIVTRTTY
LELLSEFPALKHLIMLCAASPMI
ASQLARYPLLLDELDPGTLYQPTATDAYRDELRL
QYLLRVPEEDEEQLEALRQFKQA
QLLRIAAADIAAGTLPVMKVSDDLTLWLAEAMIDAV
VQQAQWQMVARYGQPAHLDERQGR
GFAVVGYGKLGWELGYSSDLDLIFLHDCPMQVM
TNGEREIDGRQFYLRRLAQRIMHLF
STRTSSGILYEVDARLRPSGAAGMLVTSADAFAD
YQOHEAWTWEHQALVRARVVYQDP
QLTSQFQDAVRRTIMTTARDGKTLQTEVREMREKM
RAHLGNKHRDRFDIKADEGGITDI
EFIAQYLVRLRYAHEKPKLTRWSDNVRILELLAQN
GIMDEHEAQALTVAYTTLRDELHH
LALQELPGHVAQTCFSKRALVQASWRKWLAV"
/gene="STY3380"

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misc-feature complement(16387..16416
)

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```

gene complement(18502..19803
)
CDS complement(18502..19803
)

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/note="PS00904 Protein
prenyltransferases alpha subunit
repeat signature"
/gene="STY3381"

/note="Orthologue of E. coli ygif
(YGIF-ECOLI); Fasta hit to
YGIF-ECOLI (433 aa), 85% identity
in 433 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical
protein"
/protein-id="CAD07727.1"
/db-xref="GI:16504279"
/db-xref="SPTREMBL:Q8Z3N0"
/translation="MAQEIELKFIVNHDAVDALR
NHLHTLGGEHHAPSQLLNIYFETP
DNWLRRHDMGLRIRGENGRYEMTMKIAGRVTGGL
HORPEYNVALSEPVLDTQLPAEV
WPDGNLPDGLASSVQPLFSTDFYREKWCLDVDGS
RIEIALDLGDVKAGEFAEPICELE
LELLRGDTRAVLKLAKQLLSQTGLRQGSLSKAAR
GYHLAQGNAPRENTPTAILRTAAK
ATVEQGLEASLDLALSQWQYHEELWLRGDESAKE
HVLDMGLVRHALMLFGGIVPRKA
SAHLRDLTLQAEATMTSAVSAVTAVYSTQTAMAK
LALTEWLVTKAWQPFLDAKAQAKM
ADSFKRFDIHLRHAELKKVFGQPLGDKYRDQ
LPRLTRDIDSVLLLAGYYDAMVAQ
AWLENWQGLRHAIITGQRIEIEHFRNEAINQQPF

```

gene	20045..20659	/gene="STY3382"
CDS	20045..20659	/gene="STY3382" /note="Orthologue of E. coli ygiM (YGIM-ECOLI); Fasta hit to YGIM-ECOLI (206 aa), 91% identity in 206 aa overlap. Contains a possible membrane spanning hydrophobic domain" /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07728.1" /db-xref="GI:16504280" /db-xref="SPTREMBL:Q8XFH7" /translation="MPKLRLIGLTLALSATAVS HAEETRYVSDENLTWVRSGPGDNY RLVGTVNAGEEVTLQSDANYGQIKDSSGRTAWI PLKELNTTPSLRTRVPDLENQVKT LTDKLNNDTTWNQRTADMQQKVAQSDSVINGLK EENQKLKNELIVAQKKVSAANLQL DDKQRTIIMQWFMYGGLGIGLLLGLVLPHPMIP SRKRKDRWMN" /gene="STY3383" /note="synonym: cca"
gene	20722..21963	/gene="STY3383"
CDS	20722..21963	/note="synonym: cca" /gene="STY3383" /EC-number="2.7.7.25" /note="Similar to Escherichia coli tRNA nucleotidyltransferase cca SW:CCA-ECOLI (P06961) (412 aa) fasta scores: E(): 0, 89.5% id in 411 aa" /codon-start=1 /transl-table=11 /product="tRNA nucleotidyltransferase" /protein-id="CAD07729.1" /db-xref="GI:16504281" /db-xref="GOA:Q8Z3M9" /db-xref="SPTREMBL:Q8Z3M9" /translation="MKIYLVGGAVRDALLGLPVK DKDWVVVGATPQEMLDAGYQQVGR DFPVFLHPQTHEEYALARTERKSGSGYTGFCTCYA APDVTLEADLQRRDLTINALARDD DGQIIDPYHGRRDLEARLLRHVSPAFGEDPLRVL RVARFAARYAHLSFRIADETLTLM REMTAAGELEHLTPERVVKETENALTTRNPQVYF QVLRDCGALRVLFPEIDALFGVPA PAKWHPEIDTGVHTLMTLSMAAMLSPQLDVRFAT LCHDVGKGLTPKNLWPRHHGHGPV GVKLVEQLCQRLRVPNDLRDLAKLVAAAYHDLIHT FPILOPKTIVKLFDAIDAWRKPPR VEQIALTSEADVGRGTGFEASDYPQGRWLREAWQ VAQAVPTKEVVEAGFGKIEIREEL TKRRIAANWKEKRCNPAS" /gene="STY3383" /note="Pfam match to entry PF01743 PolyA-pol, Poly A polymerase family, score 216.30, E-value 4.6e-61"
misc-feature	20893..21369	/gene="STY3383" /note="Pfam match to entry PF01966 HD, HD domain, score 85.90, E-value 8.3e-22"
misc-feature	21403..21708	/gene="STY3383" /note="Pfam match to entry PF01966 HD, HD domain, score 85.90, E-value 8.3e-22"
gene	complement(22068..22889)	/gene="STY3384"
CDS	complement(22068..22889)	/note="synonym: bacA" /gene="STY3384" /note="Orthologue of E. coli bacA (BACA-ECOLI); Fasta hit to BACA-ECOLI (273 aa), 97% identity in 273 aa overlap" /codon-start=1 /transl-table=11

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protein (putative undecaprenol
kinase)"
/protein-id="CAD07730.1"
/db-xref="GI:16504282"
/db-xref="GOA:Q8ZLY3"
/db-xref="SWISS-PROT:Q8ZLY3"
/translation="MSDMHSLLIAAILGVVEGLT
EFLPVSSSTGHMIIIVGHLLGFEGDT
AKTFEVVIQLGSILAVVVMFWRRRLFGLIGIHFR
PLQREGESKGRLLTIHILLGMIPA
VVLGLVFHDTIKSLFNPINVMYALVVGGLLLIAA
ECLKPKKEPRAPGLDDMTYRQAFMI
GCFQCLALWPGFSRSGATISGGMLMGVSRYAASE
FSFLLAVPMMMGA TVLDLYKSWSF
LTAADIPMFAVGFTAFVVALIAIKTFLQLIKRI
SFIPFAIYRFVVA AVYVVF"
gene      complement(22987..23349 /gene="folB"
)
CDS      complement(22987..23349 /note="synonym: STY3385"
)
/EC-number="4.1.2.25"
/note="Similar to Escherichia coli
dihydroneopterin aldolase folB
SW:FOLB-ECOLI (P31055; P76659)
(122 aa) fasta scores: E(): 0,
93.3% id in 119 aa"
/codon-start=1
/transl-table=11
/product="dihydroneopterin
aldolase"
/protein-id="CAD07731.1"
/db-xref="GI:16504283"
/db-xref="GOA:Q8Z3M7"
/db-xref="SPTREMBL:Q8Z3M7"
/translation="MMDIVFIEQLSVITTIGVYD
WEQTIEQKLVFDIEMAWDNRKSAK
SDDVADCLSYADIADTVINHVEGGRFALVERVAE
EVADLLLSRFNSPWVRIKLSKPSA
VARAANVGVIIERGNNLK"
misc-feature complement(22999..23337 /gene="folB"
)
/note="Pfam match to entry PF02152
FolB, Dihydroneopterin aldolase,
score 176.60, E-value 5.7e-50"
gene      23453..24064 /gene="STY3386"
CDS      23453..24064 /gene="STY3386"
/note="Orthologue of E. coli ygiH
(YGIH-ECOLI); Fasta hit to
YGIH-ECOLI (205 aa), 95% identity
in 203 aa overlap. Contains
multiple possible membrane
spanning hydrophobic domains"
/codon-start=1
/transl-table=11
/product="putative membrane
protein"
/protein-id="CAD07732.1"
/db-xref="GI:16504284"
/db-xref="GOA:Q8XGX7"
/db-xref="SWISS-PROT:Q8XGX7"
/translation="MSAIAPGMILFAYLCGSISS
AILVCRIAGLPDPRESGSGNPGAT
NVLRIIGGKGA AVAVLIFDILKGMLPVWGAYALGV
TPFWLGLIAIAACLGHIWPVFFGF
KGGKGVATAFGAIAPIGWDLTGVMAGTWLLTVLL
SGYSSLGAIVSALIAPFYVWWFKP
QFTFPVSMLSCLILLRHDNIQRLWRRQETKIWT
KLKKKRQKD"
gene      complement(24314..25327 /gene="STY3387"
)
CDS      complement(24314..25327 /gene="STY3387"
)
/note="Highly similar to
Pasteurella haemolytica

```


gcp SW:GCP-PASHA (P36175) (325 aa)
 fasta scores: E(): 0, 78.1% id in
 319 aa and to Escherichia coli
 probable O-sialoglycoprotein
 endopeptidase SW:GCP-ECOLI () (337
 aa) fasta scores: E(): 0, 95.0% id
 in 337 aa"
 /codon-start=1
 /transl-table=11
 /product="possible glycoprotease"
 /protein-id="CAD07733.1"
 /db-xref="GI:16504285"
 /db-xref="GOA:Q8Z3M6"
 /db-xref="SPTREMBL:Q8Z3M6"
 /translation="MRVLGIETSCDETGIAIYDD
 KKGLLANQLYSQVKLHADYGGVVP
 ELASRDHVRKTVPLIQAAALKEAALTASDIDAVAY
 TAGPGLVGALLVGATVGRSLAFW
 NVPAIPVHHMEGHLLAPMLEDNPPDFPFVALLVS
 GGHTQLISVTGIGQYELLGESIDD
 AAGEAFDKTAKLLGLDYPGGPMLSKMASQGTAGR
 FVFPRPMTDRPGLDFSFSGLKTFA
 ANTIRSNGDDEQTRADIARAFEDAVVDTLMIKCK
 RALESTGFKRLVMAGGVSANRTL
 AKLAEMMQKRRGEVIFYARPEFCTDNGAMIAYAGM
 VRFKAGVTADLGVTVRPRWPLAEL PAA"
 /gene="STY3387"
 /note="Pfam match to entry PF00814
 Peptidase-M22, Glycoprotease
 family, score 670.50, E-value
 8.3e-198"
 /gene="STY3387"

misc-feature complement(24386..25327
)

misc-feature complement(24980..25042
)

gene 25555..25770
 /gene="STY3388"
 /note="synonym: rpsU"

CDS 25555..25770
 /gene="STY3388"
 /note="Orthologue of E. coli rpsU
 (RS21-ECOLI); Fasta hit to
 RS21-ECOLI (70 aa), 100% identity
 in 70 aa overlap"
 /codon-start=1
 /transl-table=11
 /product="30S ribosomal subunit
 protein S21"
 /protein-id="CAD07734.1"
 /db-xref="GI:16504286"
 /db-xref="GOA:P02379"
 /db-xref="SWISS-PROT:P02379"
 /translation="MPVIKVVRENEPFDVALRRFK
 RSCEKAGVLAEVRRREFYEKPTTE
 RKRAKASAVKRHAKKLARENARRTRY"
 /gene="STY3388"
 /note="Pfam match to entry PF01165
 Ribosomal-S21, Ribosomal protein
 S21, score 127.90, E-value
 1.9e-34"

misc-feature 25558..25719

misc-feature 25591..25629
 /gene="STY3388"
 /note="PS01181 Ribosomal protein
 S21 signature"

gene 26006..27751
 /gene="STY3389"
 /note="synonym: dnaG"

CDS 26006..27751
 /gene="STY3389"
 /note="Orthologue of E. coli dnaG
 (PRIM-ECOLI); Fasta hit to
 PRIM-ECOLI (581 aa), 86% identity
 in 581 aa overlap"
 /codon-start=1
 /transl-table=11
 /product="DNA primase"
 /protein-id="CAD07735.1"
 /db-xref="GI:16504287"
 /db-xref="GOA:Q8Z3M5"

		/translation="MAGRIPRVFINDLLARTDIV DLIDVRVKLKKQKGNYHACCPFHN EKTPSFTVNGEKQFYHCFGCGAHGNAIDFLMNYD KLEFVETVEELAAMHNLEIPYEAG TGLSQIERHQRONLYQLMNGLNDFYQOSLTHPAA KPARDYLQKRGLSAEIIQRF AIGF APPGWDNALKRFGNNSDNKALLLDAGMLVNNEQG STYDRFRNRVMFPIRDKRGRVIGF GGRVLGNDTPKYLNSPETDIFHKGRQLYGLYEAQ QYSAEPQORLLVVEGYMDVVALAQY DINYAVASLGTSTTADHMHMLFRATNNVICCYDG DRAGRDAAWRALETAMPYMTDGRQ VRFMFLPDGEDPDTLVRKEGKAAFEARMEQAQPL STFLFNSLLPQVDLSSPDGSTQLA ALALPLINQVPGDTHRIQLRQTLGLKLGIFDDSQ LDRLVPKQAESGVSRPAPQLKRTT MRILIGLLVQNPD LAPLVPPLDALDQNKLPGLGL FKELVKTC LAQPGLTTGQLELYR GTNDAATLEKLSMWDDIADKAIAEKTFTDSLNMH FDSLLQLRQEELIARDRTHGLSSE ERRELWTLNQELARK" /gene="STY3389" /note="Pfam match to entry PF01807 zf-CHC2, CHC2 zinc finger, score 146.10, E-value 6.2e-40" /gene="STY3389" /note="Pfam match to entry PF01751 Toprim, Toprim domain, score 91.80, E-value 1.4e-23" /gene="STY3390" /note="synonym: rpoD" /gene="STY3390" /note="Orthologue of E. coli rpoD (RPSD-ECOLI); Fasta hit to RPSD-ECOLI (613 aa), 98% identity in 615 aa overlap" /codon-start=1 /transl-table=11 /product="RNA polymerase sigma-70 factor" /protein-id="CAD07736.1" /db-xref="GI:16504288" /db-xref="GOA:Q8Z3M4" /db-xref="SPTREMBL:Q8Z3M4" /translation="MPHIVREAPDSRSEQRPKY KYALALNVDSYTVDTNQTNKCGRY LMEQN PQSQLKLLVTRGKEQG YLT YAEVNDHLPE DIVDS DQIEDIIQMINDMGIQVME EAPDADDLLLAENTTSTDEDAEEAAAQVLSSVES EIGRTTDPVRMYMREMGTVELLTR EGEIDIAKRIEDGINQVQCSVAEYPEAITYLLEQ YDRVEAE EARLSDLITGFVDPNAE EEMAPTATHVGS ELSQEDLDDDEDEDEEDGDDDA ADDDNSIDPELAREKF AELRAQYV VTRDTIKAKGRSHAAAQEEILKLSEVFKQFRLVP KQFDYLVNSMRVMMDRVRTQERLI MKLCVEQCKMPKKNFITLFTGNETSETWFNA AIA MNKPWSEKLHDVAEEVQRCLOKLR QIEEETGLTIEQVKDINRRMSIG EAKARRAKKEM VEANLRLVISIAKKYTNRGLQFLD LIQEGNIGLMKA VDKFEYRRGYKFSTYATWWIRQ AITRSIADQARTIRIPVHMIETIN KLNRI SRQMLQEMGREPTPEELAERMLMPEDKIR KVLKIAKEPISMETPIGDDEDSHL GDFIEDTTLELPLDSATTESLRAATHDVLAGLTA REAKVLRMRFGIDMNTDHTLEEVG KQFDVTRERIRQIEAKALRKL RHPSRSEVLRSFL DD" /gene="STY3390" /note="Pfam match to entry PF00140 sigma70, Sigma-70 factor, score 462.50, E-value 3.5e-135" /gene="STY3390" /note="PS00715 Sigma-70 factors family signature 1"
misc-feature	26111..26281	
misc-feature	26780..27028	
gene	27766..29748	
CDS	27766..29748	
misc-feature	29023..29706	
misc-feature	29113..29154	

gene	complement(29872..30378)	/note="PS00716 Sigma-70 factors family signature 2" /gene="mug"
CDS	complement(29872..30378)	/note="synonym: STY3391" /gene="mug"
		/EC-number="3.2.2.-" /note="Similar to Escherichia coli G/U mismatch-specific DNA glycosylase Mug SW:MUG-ECOLI (P43342) (168 aa) fasta scores: E(): 0, 80.8% id in 167 aa Orthologue of E. coli MUG-ECOLI; Fasta hit to MUG-ECOLI (168 aa), 81% identity in 167 aa overlap" /codon-start=1 /transl-table=11 /product="G/U mismatch-specific DNA glycosylase" /protein-id="CAD07737.1" /db-xref="GI:16504289" /db-xref="GOA:Q8XFG2" /db-xref="SPTREMBL:Q8XFG2" /translation="MVKDILAPGLRVVFCGINPG LSSANTGFPPFAHPANRFWKVIHLA GFTDRQLKPEEAELLDLDFRCGVTKLVDRPTVQAT EVKLHELRSNGRNLIKIEDYQPA ALAVLGKQAFEQGFSQRGIAWGKQKIAIGATMVW VLPNPSGLNRIKTEKLVEAYRELD QALIMRGL"
misc-feature	complement(29953..30369)	/gene="mug"
tRNA	30504..30579	/note="Pfam match to entry PF02299 DNA-glycosylase, G:T/U mismatch-specific DNA glycosylase, score 285.30, E-value 7.6e-82" /product="tRNA-Met" /note="tRNA Met anticodon CAT, Cove score 93.86"
gene	complement(30659..31426)	/gene="STY3392"
CDS	complement(30659..31426)	/gene="STY3392"
		/note="Orthologue of E. coli YQJH-ECOLI; Fasta hit to YQJH-ECOLI (254 aa), 72% identity in 253 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07738.1" /db-xref="GI:16504290" /db-xref="SPTREMBL:Q8Z3M3" /translation="MTTSSARYPQVRNLRFRE LTVLRVERISAGFQRIVLGGEALD GFTSLGFDDHTKVFFPEPGCRFTPPTVTEEGIIW GEGVRPVS RDYTPLYDEAHRELAL DFFIHDGGVASRWAMEAREGDTLTIGGPRGSLVV PEDYACQVYVCDESGMPALRRRLE SLSRLPARPAVTALVSIQDAAYRDYLAHLTDITV EYVVGDEQAMQTRLSQLAIPESD YFIWITGEGKTVKRLSQCFEKGFDPHLVRAAAYW HRK"
gene	31661..32305	/gene="STY3393"
CDS	31661..32305	/gene="STY3393"
		/note="Orthologue of E. coli YQJI-ECOLI; Fasta hit to YQJI-ECOLI (207 aa), 69% identity in 215 aa overlap. Note hydrophylic N-terminus rich in the amino acid His." /codon-start=1 /transl-table=11 /product="conserved hypothetical

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gene complement(32302..33870) /protein-id="CAD07739.1"
                                     /db-xref="GI:16504291"
                                     /db-xref="SPTREMBL:Q8Z3M2"
                                     /translation="MQNQHEGCKNQDCHKHDGCC
KDRHQHEGCHSAHQHENASCGGE
HRHGHGCGRHGQGGGRRQRFFGHGELRLVILDIL
TRDASHGYELIKAIENLTGGGYTP
SAGVIYPTLDFLDQDQFITISDEEGGRKKIAITA
NGAQWLDENREHLTHIQARLKARC
VGMELRKNPQMKRALDNFKAVLDRINHSNDINDA
QIKRIIGVIDRAALEIAELD"
                                     /gene="cheM"

CDS complement(32302..33870) /note="synonym: STY3394"
                                     /gene="cheM"

                                     /note="Similar to many including:
Escherichia coli methyl-accepting
chemotaxis protein II Tar or CheM
SW:MCP2-ECOLI (P07017; P76301)
(553 aa) fasta scores: E(): 0,
34.7% id in 519 aa Fasta hit to
MCP3-ECOLI (546 aa), 35% identity
in 524 aa overlap Fasta hit to
MCP4-ECOLI (533 aa), 33% identity
in 525 aa overlap Fasta hit to
MCP1-ECOLI (551 aa), 37% identity
in 531 aa overlap Parologue of E.
coli tar (MCP2-ECOLI); Fasta hit
to MCP2-ECOLI (553 aa), 35%
identity in 519 aa overlap"
                                     /codon-start=1
                                     /transl-table=11
                                     /product="methyl-accepting
chemotaxis protein II"
                                     /protein-id="CAD07740.1"
                                     /db-xref="GI:16504292"
                                     /db-xref="GOA:Q8Z3M1"
                                     /db-xref="SPTREMBL:Q8Z3M1"
                                     /translation="MFLHNIKIRSKLFMAFGLFI
VLMVVSALSLSLDRANTGMQDI
ITNDYPTTVKANLLIDNFNDFFIAQQLMLLDEEG
RWSQSSQKELSEISQRISSALLDEL
SRENSHDADSQKIINEIREARQQYLESRFRILKD
IQSNNRQAAIQEMMTRTVQVQKVY
KDKVQELIAVQDALMHEASVQVKEDFKNNRTLLI
TLALISIAAGGVIGWYIVRSITRP
LDDAVRFAEAIADGDLTRHITTDYKDETGVLLQA
LMAMKTRLLDIVQEVQNGSESIST
AAAQIVAGNQDLAARTEEQASSVEETAASMEQIT
ATVKNTADHTSEATKLSAGAASV
KNNGEMMNQVTQKMRVINDTANRMSDIINIIDS
AFQTNILALNAAVEAARAGEHGRG
FAVVAGEVRQLAQKSASSASEIRNLIEDSTSQTQ
EGMHLVEKASALINGMVDNVEEMD
VILREIGQASREQTDGISQINSAIGLIDAATQQN
SCLVEESVAAAASLINEQALHLKEL
VNVFRVREEDTQPA"
                                     /gene="cheM"

misc-feature complement(32617..32799) /note="Pfam match to entry PF00015
MCPsignal, Methyl-accepting
chemotaxis protein (MCP) signaling
domain, score 125.70, E-value
1.7e-34"
                                     /gene="cheM"

misc-feature complement(33085..33294) /note="Pfam match to entry PF00672
DUF5, HAMP domain, score 59.90,
E-value 5.4e-14"
                                     /gene="STY3395"

gene complement(34258..35778) /note="synonyms: aer, air"
                                     /gene="STY3395"

CDS complement(34258..35778)

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(AER-ECOLI); Fasta hit to
AER-ECOLI (506 aa), 84% identity
in 506 aa overlap"
/codon-start=1
/transl-table=11
/product="aerotaxis receptor
protein"
/protein-id="CAD07741.1"
/db-xref="GI:16504293"
/db-xref="GOA:Q8Z3M0"
/db-xref="SPTREMBL:Q8Z3M0"
/translation="MSSHYPVSQLNTPLDDDTTL
MSTTDLESYITHANDTFVQVSGYQ
LNELLARPHNLVRHPDMPKAAFADMWYTLKQGE
WSGIVKNRRKNGDHYWVRANAVPM
IREGRVTGYMSIRTRATDDEIAAVEPLYQALNE
RCSKRIHKGLVVRQGLLGKLPAMP
VRWRVRSIMGLMAVMLALALFGTDASWQALLGA
LAMLAGTALFEWQIVRPIENVATQ
ALKVATGERNSVQHLNRSDELGLTLRAVGQLGLM
CRWLINDVSSQVSSVRNGSERLAK
GNNDLNEHTRQTVENVQETVTTMNQMAESVKLNS
ETASAADKLSMAASSAATQGGEAM
DTVIKTMDDIAHSTQIRIGTITTLINDIAFQTNIL
ALNAAVEAARAGEQKGKFAVVAGE
VRHLASRSANAANDIRKLIDASATKVQSGSEQVH
AAGRTMDDIVAQVQNVTLIIARIS
QSTQEQTDGLSSLTRADELNRITQKNAALVEES
AQVSAMVKHRASRLEDAVTVLH"
misc-feature      complement(34546..34728
)
                    /gene="STY3395"
                    /note="Pfam match to entry PF00015
MCPsignal, Methyl-accepting
chemotaxis protein (MCP) signaling
domain, score 123.40, E-value
7.9e-34"
misc-feature      complement(35014..35223
)
                    /gene="STY3395"
                    /note="Pfam match to entry PF00672
DUF5, HAMP domain, score 28.80,
E-value 0.00013"
misc-feature      complement(35416..35541
)
                    /gene="STY3395"
                    /note="Pfam match to entry PF00785
PAC, PAC motif, score 33.70,
E-value 5.6e-08"
gene              36298..37587
CDS               36298..37587
                    /gene="STY3396"
                    /gene="STY3396"
                    /note="Fasta hit to ARGM-ECOLI
(406 aa), 35% identity in 373 aa
overlap Fasta hit to ARGD-ECOLI
(405 aa), 34% identity in 372 aa
overlap Fasta hit to GOAG-ECOLI
(421 aa), 35% identity in 405 aa
overlap Fasta hit to GABT-ECOLI
(426 aa), 34% identity in 379 aa
overlap Orthologue of E. coli ygjG
(OAT-ECOLI); Fasta hit to
OAT-ECOLI (429 aa), 95% identity
in 428 aa overlap"
                    /codon-start=1
                    /transl-table=11
                    /product="probable
aminotransferase"
                    /protein-id="CAD07742.1"
                    /db-xref="GI:16504294"
                    /db-xref="GOA:Q8Z3L9"
                    /db-xref="SPTREMBL:Q8Z3L9"
                    /translation="MKALNREVIDYFKEHVNPGF
LEYRKSVTAGGDYGAVEWQAGSLN
TLVDTQGGQEFIDCLGGFGIFNVGHRNPVVVSAVQ
NQLAKQPLHSQELLDPLRAMLAKT
LAALTPGKLYSFFCNSGTESVEAALKLAKAYQS
PRGKFTFIATSGAFHGKSLGALSA
TAKSTFRRPFMPLLPGFRHVPFGNIDAMSMASFSE

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		PPQGYLTEVRKLCDEFGALMILDEVQTMGRGTGK MFACEHENVQPDILCLAKALGGGV MPIGATIAATEEVFSVLFDNPFLLHTTTFGGNPLAC AAALATINVILLEQNLPAQAEQKGD TLLDGFRLAREYPNLVHEARGKGLMLAIEFVDN ETGYRFASEMFRQRLVAGTLNNA KTIRIEPPLTLTIELCEQVLKSARNALAAMQVSV EEV"
misc-feature	36415..37500	/gene="STY3396" /note="Pfam match to entry PF00202 aminotran-3, Aminotransferases class-III pyridoxal-phosphate, score 603.60, E-value 2.1e-209"
misc-feature	37009..37122	/gene="STY3396" /note="PS00600 Aminotransferases class-III pyridoxal-phosphate attachment site"
gene	37758..39775	/gene="STY3397"
CDS	37758..39775	/pseudo /gene="STY3397" /note="Highly similar to Escherichia coli 2,4-dienoyl-coa reductase [NADPH] fadH SW:FADH-ECOLI (P42593) (671 aa) fasta scores: E(): 0, 87.6% id in 355 aa. Contains a framehift mutation after codon 356 and a stop codon within the CDS. The sequence has been checked and is believed to be correct"
misc-feature	37770..38750	/pseudo /codon-start=1 /transl-table=11 /product="probable oxidoreductase (pseudogene)." /gene="STY3397" /note="Pfam match to entry PF00724 oxidored-FMN, NADH:flavin oxidoreductase / NADH oxidase family, score 490.90, E-value 9.8e-144"
gene	complement(39856..40992)	/pseudo /gene="STY3400"
CDS	complement(39856..40992)	/note="synonym: ygj0" /gene="STY3400" /note="Orthologue of E. coli ygj0 (YGJO-ECOLI); Fasta hit to YGJO-ECOLI (388 aa), 91% identity in 378 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07744.1" /db-xref="GI:16504295" /db-xref="GOA:Q8Z3L8" /db-xref="SPTREMBL:Q8Z3L8" /translation="MSHVDDGFRSLTLKRFPQTD DVNPLLAWEAAD EYLLQQLDETEI RGPVLILNDTFGALSCALAEHSPYSIGDSYLSSEL GTRENLRHNGIAESSVTFLDSTAD YPQAPGVVLIKVPKTLALLEQQLRALRKVVTAQT RIIAGAKARDIHTSTLELFEKVLG PTTTTLAWKKARLINCTFSHPQLANAPQTLWKL EDTGWTIHNHANVFSRTGLDIGAR FFMQHLPENLDGEIVDLGCGNGVIGLSLLAKNPQ ANVVVFVDESPMAVDSSRLNVETNL PEAFERCEFMINNALS GVEPFRFNAVFCNPPFHQ KHALTDNIAWEMFHHARRCLKING ELYIVANRHLDFHKLKKIFGNCATIATNNKFVI LKAVKQGRRR"
misc-feature	complement(40069..40089)	/gene="STY3400"

gene	41078..41575	Adenine-specific DNA methylases signature"
CDS	41078..41575	/gene="STY3401" /gene="STY3401" /note="Orthologue of E. coli ygjP (YGJP-ECOLI); Fasta hit to YGJP-ECOLI (179 aa), 88% identity in 162 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07745.1" /db-xref="GI:16504296" /db-xref="GOA:Q8XF71" /db-xref="SPTREMBL:Q8XF71" /translation="MTSLTYLQGYPEHLLAQVRA LIAEQRLGAVLEKRYPGAHDYATD KALYHYTQELKSQFLRNAPPINKVMYDSKIHVLK NALGLHTAVSRVQGGKLKAKAEIR VATVFRNAPEPFLRMIVVHELHLKEKDHNAFY QLCCHMEPQYHQLEFDTLWLTHQ ALSAQ"
gene	41727..42419	/gene="STY3402"
CDS	41727..42419	/note="synonym: ygjQ" /gene="STY3402" /note="Fasta hit to SANA-ECOLI (239 aa), 39% identity in 219 aa overlap Orthologue of E. coli ygjQ (YGJQ-ECOLI); Fasta hit to YGJQ-ECOLI (230 aa), 74% identity in 230 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07746.1" /db-xref="GI:16504297" /db-xref="SPTREMBL:Q8Z3L7" /translation="MLSQCARFIRRLCFTRRALT VACFLLVAAAGVALFYSNWLIVNAS QHLLTWNDIQTVPARNVGLVLGAKPGNRYFTRRIN TAAALYHAGKVKWLLVSGDNGKKE YDEPSAMQQALIAKGVPEAAIFCDYAGFSTLDSV VRARKVFGESRITIISQAFHNQRA IWLAAQQYGIDAIGVNAPDLNKRHGTYTRLREKLA RVSAVLDAKILHRQPKYLGAQVTI GADSAHGCPSPQ"
gene	42471..43505	/gene="STY3403"
CDS	42471..43505	/gene="STY3403" /note="Similar to Escherichia coli hypothetical protein YgjR SW:YGJR-ECOLI (P42599; P42600; P76661) (328 aa) fasta scores: E(): 0, 83.1% id in 326 aa and to Sus scrofa (Pig) dimeric dihydrodiol dehydrogenase Sus2dD TR:Q9TV69 (EMBL:AB021929) (335 aa) fasta scores: E(): 2.9e-15, 25.4% id in 346 aa" /codon-start=1 /transl-table=11 /product="possible oxidoreductase" /protein-id="CAD07747.1" /db-xref="GI:16504298" /db-xref="GOA:Q8Z3L6" /db-xref="SPTREMBL:Q8Z3L6" /translation="MTKIPFWSPLTFMIRFAVIG TNWITRQFVDAAHETGKFRLLAAVY SRRLEQAQSFANDYPVEHLFTSLEAMAQSDAIEA VYIASPNSLHFSQTQRFLOHKKHV MCEKPLASNLAEVDAAIACARDNQRVLF EAFKTA CLPNFLLLLRESLPKIGRMHKALLN YCOYSSRYQRYLNGENPNTFNPFSNGSIMDIGY YCLASAIALWGEPRSVQASANLLE SGVDAHGVVMDYGD FSVTLQHSKVSDSVLASEI

misc-feature 42510..43151

gene 43773..44741
CDS 43773..44741

gene 44996..46240
CDS 44996..46240

ALMODLTQPQHINTMLYEAGAFQAQLIENHAVEHP
GLSLSRATAKWLTEIRRQTGVIFP
ADDLTHPPTA"

/gene="STY3403"
/note="Pfam match to entry PF01408
GFO-IDH-MocA, Oxidoreductase
family, score 177.50, E-value
2.2e-49"

/gene="STY3404"
/gene="STY3404"
/note="Similar to Escherichia coli
hypothetical protein YgjT
SW:YGJT-ECOLI (P42601) (321 aa)
fasta scores: E(): 0, 86.9% id in
321 aa and to Alcaligenes sp
tellurium resistance protein TerC
SW:TERC-ALCSP (P18780) (346 aa)
fasta scores: E(): 3.5e-12, 34.8%
id in 325 aa. Contains multiple
possible membrane spanning
hydrophobic domains and a possible
N-terminal signal sequence.
Orthologue of E. coli ygjT
(YGJT-ECOLI); Fasta hit to
YGJT-ECOLI (321 aa), 87% identity
in 321 aa overlap"

/codon-start=1
/transl-table=11
/product="possible drug efflux
protein"
/protein-id="CAD07748.1"
/db-xref="GI:16504299"
/db-xref="GOA:Q8Z3L5"
/db-xref="SPTREMBL:Q8Z3L5"
/translation="MNTVGTPLLWGGFAVVVVIM
LSIDLLQLQRRGAHAMSMKQAAGW
SILWVTLSLLFNAAFWWYLAETQGREVADPQALA
FLTGYLIEKSLAVDNVFWLMLFS
YFSVPPALQRRVLVYGVLGAIIVLRTIMIFAGTWL
ITQFEWLLYVFGAFLFTGVKMA
AKEDESGIGEKPMVRWLRGHLRMTDTIENEHFFV
RKNGLLYATPLLLVLIMVEFS
FAVDSIPAIFAVTTDPFIVLTSNLF
FLLSGVAERFSMLKYGLAVILVFI
GIKMLIVDFYHIPIAISLGVVFGILTITLVINTW
VNHQRDKKLRQA"

/gene="STY3405"
/gene="STY3405"
/note="Similar to Escherichia coli
hypothetical protein SW:YGJU-ECOLI
() (414 aa) fasta scores: E(): 0,
93.2% id in 414 aa, and to
Neisseria meningitidis MC58
sodium/dicarboxylate symporter
family protein TR:AAF42441
(EMBL:AE002561) (409 aa) fasta
scores: E(): 0, 68.5% id in 394
aa. Contains possible membrane
spanning hydrophobic domains.
Orthologue of E. coli ygjU
(YGJU-ECOLI); Fasta hit to
YGJU-ECOLI (414 aa), 93% identity
in 414 aa overlap"

/codon-start=1
/transl-table=11
/product="probable membrane
transport protein"
/protein-id="CAD07749.1"
/db-xref="GI:16504300"
/db-xref="GOA:Q8Z3L4"
/db-xref="SPTREMBL:Q8Z3L4"
/translation="MATQRASGLLQRLAQQSLVK
QILVGLVLGILLAWISKPVAEAVG
LLGTLFVGALKAVAPVLVLMVMASIANHQHGQK
TNIRPILFLYLLGTFSAALAAVVF"

		VSNPIDALLNANYIGILVWAVGLG FALRHGNETTKNLVNDMSNAVTFMVKLVIRFAPV GIFGLVSSTLATTFGFSTLWGYAHL LVVLIGCMLLVALVVNPLLWFVKIRRNPPYPLVFA CLRESGVYAFFTRSSAANIPVNMA LCEKLNLDRTYVSISPLGATINMAGAAITITVL TLAAVHTLGVVLDLPTALLLSVVA SLCACGASGVAGGSLLLIPLACNMFIPNDIAMQ VVAVGFIIGVLQDSCETALNSSTD VLFTAAACQAEEDERLANNALRS"
misc-feature	45047..46189	/gene="STY3405" /note="Pfam match to entry PF00375 SDF, Sodium:dicarboxylate symporter family, score 582.00, E-value 3.8e-171"
gene	46690..47352	/gene="STY3406"
CDS	46690..47352	/gene="STY3406" /note="Fasta hit to YGHB-ECOLI (219 aa), 63% identity in 216 aa overlap Fasta hit to DEDA-ECOLI (219 aa), 30% identity in 223 aa overlap Orthologue of E. coli YQJA-ECOLI; Fasta hit to YQJA-ECOLI (220 aa), 95% identity in 220 aa overlap. Contains multiple possible membrane spanning hydrophobic domains" /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07750.1" /db-xref="GI:16504301" /db-xref="GOA:Q8Z3L3" /db-xref="SPTREMBL:Q8Z3L3" /translation="MELLTQLLNALWAQDFETLA NPSMIGMLYFVLFMILFLENGLLP AAFLPGDSLILVGVLIKAGMGFPQTILLTVA ASLGCWVSYSIQGRWLGNTRTVQNW LSHLPAYHQRAHHLFHKHGLSALLIGRFIAFVR TLLPTIAGISGLNNARFQFFNWMS GLLWVLILTSLGYLLGKTPVFMKYEDQLMSCLML LPVVLLFFGLAGSLVMLWKKKYGS RG"
misc-feature	46777..47259	/gene="STY3406" /note="Pfam match to entry PF00597 DedA, DedA family, score 230.50, E-value 2.4e-65"
gene	47356..47739	/gene="STY3407"
CDS	47356..47739	/gene="STY3407" /note="Orthologue of E. coli yqjB (YQJB-ECOLI); Fasta hit to YQJB-ECOLI (127 aa), 68% identity in 127 aa overlap. Contains a possible N-terminal signal sequence." /codon-start=1 /transl-table=11 /product="putative exported protein" /protein-id="CAD07751.1" /db-xref="GI:16504302" /db-xref="SPTREMBL:Q8XF92" /translation="MLKPRITARQLIWISAFLLM LTILMTWSTLRQQESTLAIRAVN QGASMPDGFSVLHHLHDANGIHFKSITPKNDMLLI TFDSPAQSAAAKTVLDQTLPHGYV VAQQDDDDNETVQWLSRLRESSHRFG"
gene	47884..48252	/gene="STY3408"
CDS	47884..48252	/gene="STY3408" /note="Orthologue of E. coli yqjC (YQJC-ECOLI); Fasta hit to YQJC-ECOLI (127 aa), 84% identity in 122 aa overlap. Contains a possible N-terminal signal sequence and possible coiled-coils

gene
CDS

48294..48599
48294..48599

/codon-start=1
/transl-table=11
/product="putative exported
protein"
/protein-id="CAD07752.1"
/db-xref="GI:16504303"
/db-xref="SPTREMBL:Q8XF23"
/translation="MKYRIALAITLFTLSAGSYA
NSLCQEKEQDIQKEISYAEKHNNQ
RRIEGLNKALSEVRANCTDSKLRAEHQKKIAEQK
EEVAERQORDLAELAKAKGDADKIDK
RERKLAEAQDELKKLEARDY"
/gene="STY3409"
/gene="STY3409"
/note="Fasta hit to YGAM-ECOLI
(113 aa), 41% identity in 99 aa
overlap Fasta hit to ELAB-ECOLI
(101 aa), 44% identity in 101 aa
overlap Fasta hit to HNS-ECOLI
(136 aa), 31% identity in 110 aa
overlap Orthologue of E. coli yqjD
(YQJD-ECOLI); Fasta hit to
YQJD-ECOLI (101 aa), 90% identity
in 101 aa overlap"

gene
CDS

48602..49000
48602..49000

/codon-start=1
/transl-table=11
/product="conserved hypothetical
protein"
/protein-id="CAD07753.1"
/db-xref="GI:16504304"
/db-xref="SPTREMBL:Q8XEQ1"
/translation="MSKDNTTEHLRAELKSLTDT
LEEVLSSSGEKSKEELSKIRSKAE
RALKESRYRLGETGDVIAKQTRVAAARADDYVRE
NPWTGVGIGAAGVLVLGVLLTRR"
/gene="STY3410"
/gene="STY3410"
/note="Orthologue of E. coli yqjE
(YQJE-ECOLI); Fasta hit to
YQJE-ECOLI (134 aa), 89% identity
in 130 aa overlap. Contains
possible membrane spanning
hydrophobic domains."
/codon-start=1
/transl-table=11
/product="putative membrane
protein"

gene
CDS

48997..49296
48997..49296

/protein-id="CAD07754.1"
/db-xref="GI:16504305"
/db-xref="SPTREMBL:Q8XFR8"
/translation="MADSRQAQGPQKSVLGIGQR
IVTIIIVEMVETRLRLAVVELEEEK
ANLFQQLLLMVGLTMLFAAFGLMSLMVLVIWAIDP
QYRLNAMIATTVVLLVLALIGGIW
TLRKARQSTLLRHTRHELANDRQILEDDQS"
/gene="STY3411"
/gene="STY3411"
/note="Orthologue of E. coli
YQJK-ECOLI; Fasta hit to
YQJK-ECOLI (99 aa), 88% identity
in 99 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical
protein"

gene
CDS

49451..49936
49451..49936

/protein-id="CAD07755.1"
/db-xref="GI:16504306"
/db-xref="SPTREMBL:Q8XGR1"
/translation="MSSKGEREKRKALLLSQIQQ
QRLDLSASRRDWLETTGAYDRGWN
TVLSLRSWALVGSSVMIAWTIRHPNMLVRWAKRG
LGIWSAWRLVKTTLRQQQLRG"
/gene="STY3412"
/gene="STY3412"
/note="Fasta hit to YPHA-ECOLI

		overlap Orthologue of E. coli yqjF (YQJF-ECOLI); Fasta hit to YQJF-ECOLI (160 aa), 81% identity in 161 aa overlap. Contains possible membrane spanning hydrophobic domains." /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07756.1" /db-xref="GI:16504307" /db-xref="GOA:Q8Z3L2" /db-xref="SPTREMBL:Q8Z3L2" /translation="MILSSDNNDALNRAIAHENS SSRRIGLLENKMKKLEDIGVLIAR ILMPVLFITAGWGKISGYAGTQQYMEAMGVPGFL LPLTILLEFGGGLAILLGFLTRTT ALFTAGFTLLTALIFHSNFAEGVNSLMFMKNLTI AGGFLLLALTGPGAFSLDRLLNKK W" /gene="STY3413" /gene="STY3413"
gene	50004..50990	/note="Orthologue of E. coli yqjG
CDS	50004..50990	(YQJG-ECOLI); Fasta hit to YQJG-ECOLI (328 aa), 93% identity in 328 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07757.1" /db-xref="GI:16504308" /db-xref="SPTREMBL:Q8Z3L1" /translation="MGQLIDGVVHDTWYDTKSSG GKFQRSASAFRNWLTADGAPGPSG EGGFAAEKDRYHLYVSLACPWAHRTLIFRKLKGL EPFIPVSVVNPLMLENGWTFDDTF PAATGDTLYQHEFLYQLYLHADPHYSGRVTVPV WDKKNHTIVSNESAEIIRMFNSAF DGLGAKAGDYPPALQSKIDELNGWIYDNVNGV YKAGFATSQQAYDEAVEKVFTALA RLEQILGQHRYLTGNQLTEADIRLWTTLVRFDPV YVTHFKCDKYRISDYLNLYGFLRD IYQIPGIAETVNMDHIRHHYFRSHKTINPTGIIS VGPWQDLLEPHGHVDVRFG" /gene="STY3413" /note="Pfam match to entry PF00043 GST, Glutathione S-transferases., score 20.40, E-value 3.5e-05" /gene="STY3414" /gene="STY3414" /note="Fasta hit to YHAI-ECOLI (118 aa), 52% identity in 118 aa overlap Orthologue of E. coli yhaH (YHAH-ECOLI); Fasta hit to YHAH-ECOLI (121 aa), 90% identity in 118 aa overlap. Contains possible membrane spanning hydrophobic domains." /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07758.1" /db-xref="GI:16504309" /db-xref="SPTREMBL:Q8XG14" /translation="MDWYLVKLVKNYLGFGGRARR KEYWMFILVNIIFTFVLGLLDAML GWORAGGEGVLTITIYGVLIPLPWWAVQFRRLHDT DRSAWWLLLLLIPIIGWLIIIAFN CQNGTPGDNRFGPDPRFS" /gene="STY3415"
misc-feature	50610..50846	
gene	51114..51479	
CDS	51114..51479	
gene	complement(51518..52414	
CDS	) complement(51518..52414	/gene="STY3415"

(316 aa), 37% identity in 286 aa overlap Orthologue of E. coli yhaJ (YHAJ-ECOLI); Fasta hit to YHAJ-ECOLI (298 aa), 97% identity in 298 aa overlap"
/codon-start=1
/transl-table=11
/product="possible LysR-family transcriptional regulator"
/protein-id="CAD07759.1"
/db-xref="GI:16504310"
/db-xref="GOA:Q8Z3L0"
/db-xref="SPTREMBL:Q8Z3L0"
/translation="MAKERALTLEALRVMDAIDR
RGSFAAAADELGRVPSALSYSYTMQK
LEEELDVVLFDRSGHRTKFTNVGRMLLERGRVLL
EAADKLTTDAEALARGWETHLTLV
TEALVPTPAFFPLIDRLAAKANTQLSLITEVLAG
AWERLEQGRADIVIAPDMHFRSSS
EINSRKLYTLMNVYVAAPDHSIHQEPEPLSEVTR
VKYRGVAVADTARERPVLTVQLLD
KQPRITVSTIEDKRQALLAGLG VATMPYSMVEQD
IAEGRLRVVSPESTSEIDIIMAWR
RDSMGEAKAWCLREIPKLFAGK"
/gene="STY3415"

misc-feature complement(51965..52390)
)
/Note="Pfam match to entry PF00126 HTH-1, Bacterial regulatory helix-turn-helix protein, lysR family, score 124.80, E-value 1.6e-33"

misc-feature complement(52256..52348)
)
/gene="STY3415"
/Note="PS00044 Bacterial regulatory proteins, lysR family signature"

gene 52519..53220
CDS 52519..53220
/gene="STY3416"
/gene="STY3416"
/Note="Fasta hit to YHHW-ECOLI (231 aa), 35% identity in 237 aa overlap Orthologue of E. coli yhaK (YHAK-ECOLI); Fasta hit to YHAK-ECOLI (233 aa), 85% identity in 233 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical protein"
/protein-id="CAD07760.1"
/db-xref="GI:16504311"
/db-xref="SPTREMBL:Q8Z3K9"
/translation="MITTRTAKQCGQADYGWLQA
RYTFSFGHYFDPTLLGYASLRVLN
QEV LAPGASFQPRTPYKVDILNLIDGAEYRDS
DGNHVQAKAGEALLLAAQPGISYS
EHNLSKV KPLTRMQLWLDACPERENALVQKIPLS
TAQQQLLASPDGEQNSLQLRQQVW
VHHITLEKGESLNFQLHGPRAYLQSIHGTFHAMT
HNEEREALTCGDGAFIRDEPNITL
VADTPLRALLVDLPV"
/gene="STY3417"
/gene="STY3417"

gene 53244..53408
CDS 53244..53408
/Note="Orthologue of E. coli yhaL (YHAL-ECOLI); Fasta hit to YHAL-ECOLI (56 aa), 71% identity in 55 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical protein"
/protein-id="CAD07761.1"
/db-xref="GI:16504312"
/db-xref="SPTREMBL:Q8XFT9"
/translation="MSKKSAKKRQPVV KPAVQEA
MSAAVPLGYEEMLTELEAIVADAE"

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gene      complement(53521..54831 /gene="STY3418"
)
CDS      complement(53521..54831 /gene="STY3418"
)
        /note="The N-terminus is highly
        similar to Escherichia coli
        hypothetical protein YhaN
        SW:YHAN-ECOLI (P42627) (187 aa)
        fasta scores: E(): 0, 77.7% id in
        184 aa and the C-terminus of this
        proteins is highly similar to
        Escherichia coli hypothetical
        protein YhaM SW:YHAM-ECOLI () (188
        aa) fasta scores: E(): 0, 92.0% id
        in 187 aa"
        /codon-start=1
        /transl-table=11
        /product="conserved hypothetical
        protein"
        /protein-id="CAD07762.1"
        /db-xref="GI:16504313"
        /db-xref="SPTREMBL:Q8Z3K8"
        /translation="MFESKINPLWQSFILAVQEE
        VKPALGCTEPISLALAAAAAAEL
        DGTVERIDAWVSPNLMKNGMGVTVPGTGMVGLPI
        AAALGALGGDAKAGLEVLKDASAK
        AVADAKAMLAAGHVAVMLQEPENDILFSRAKVYS
        GDSWACVTIVGDHTNIVRIETDKG
        VVFTQADNAQEEEEKTSPLGLVLSHTSLEEILAFVN
        AVPFDAIRFILDAARLNGALSQEG
        LRGSWGLHIGSTLAKQCDRGLLAKDLSTAILIRT
        SAASDARMGGATLPAMSNSGSGNQ
        GITATVPVMVVAEHVGADDECLARALMLSHLSAI
        YIHHQLPRLSALCAATTAAMGAAA
        GMAWLIDGRYDTIAMAISSMIGDVSGMICDGASN
        SCAMKVSTSASAAWKAVLMALDDT
        AVTGNEGIVAHNVEQSISNLCSLACRSMQQTDKQ
        IIEIMASKAH"
gene      complement(54857..56124 /gene="STY3421"
)
CDS      complement(54857..56124 /gene="STY3421"
)
        /pseudo
        /note="Similar to Escherichia coli
        hypothetical protein YhaO
        SW:YHAO-ECOLI (P42628) (425 aa).
        Contains and in-frame stop at
        codon 38 and a frameshift after
        codon 237 The sequence has been
        checked and is believed to be
        correct"
        /pseudo
        /codon-start=1
        /transl-table=11
        /product="conserved hypothetical
        transport protein (pseudogene)"
gene      complement(56502..57866 /gene="tdcG"
)
CDS      complement(56502..57866 /gene="tdcG"
)
        /note="synonym: STY3422"
        /EC-number="4.2.1.13"
        /note="Similar to Escherichia coli
        L-serine dehydratase TdcG
        SW:TDCG-ECOLI () (454 aa) fasta
        scores: E(): 0, 86.6% id in 454
        aa"
        /codon-start=1
        /transl-table=11
        /product="L-serine dehydratase"
        /protein-id="CAD07764.1"
        /db-xref="GI:16504314"
        /db-xref="GOA:Q8Z3K7"
        /db-xref="SPTREMBL:Q8Z3K7"
        /translation="MISAFDIFKIGIGPSSSHTV

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ITVDLYGSLSLTGKGHATDTAIIMGLAGNTPQDV
NIDSIPAFIQEVARSRLSVAGGA
HVVDFFPVADSILFHAETLARHENGMRITAWHGQT
PLLHKTYYSIGGGFIVEEERFGQS
HDVEKSVPYDFHSASELLTL CERQGLSVSGLMMQ
NELALRSKEQIDAGFARIWQVMAT
GIERGMNTEGVLPGLNVP RRAVALRRLLVSSDN
LSRDPMNVIDWINMFALAVSEENA
AGGRVVTALTNGACGIIPAVLAYYDKFRRPVNAN
SIARYLLSAGAIGMLYKMNASISG
AEVGCQGEVGVACSMAGLT ELLGGSPAQVCIA
AEIAMEHNLGLTCDPVAGQVQIPC
IERNAINAVKAVNAARMALRR TSEPRVSLDKVIE
TMYETGKDMNDKYRETSRGGLAIK VVCG"
gene      complement (57936..60230 /gene="tdcE"
)
CDS      complement (57936..60230 /note="synonym: STY3423"
)      /gene="tdcE"
      /note="Fasta hit to PFLB-ECOLI
      (759 aa), 79% identity in 752 aa
      overlap Orthologue of E. coli yhaS
      (TDCE-ECOLI); Fasta hit to
      TDCE-ECOLI (746 aa), 93% identity
      in 741 aa overlap"
      /codon-start=1
      /transl-table=11
      /product="probable formate
      acetyltransferase"
      /protein-id="CAD07765.1"
      /db-xref="GI:16504315"
      /db-xref="GOA:Q8Z3K6"
      /db-xref="SPTREMBL:Q8Z3K6"
      /translation="MKVNIDTSDMLYAEAWRDFK
      GTDWKEEINVCDFIQHNYTPYEGD
      ESFLADATPATTALWEKVMAGIRIENATHAPVDF
      DTNIATTTITAH DAGYIEKELEKIV
      GLQTDKPLKRALHPFGGVNMIKSSFHAYGREMDA
      DFEYTF TDLRKTHNQGVFDVYSPD
      MLRCRKSSVLTGLPDGYGRGRIIGDYRRVALYGI
      RYLVRERELQFADLQSNLERGQNL
      EATIRLREELAEHRRALLQMQEMA AKYGYDISRP
      ARNAQEAVQWLYFAYLA AVKSQNG
      GAMS LGRTASFLDIYIERDFNAGLLTEQQAQELI
      DHFIMKIRMVRF LRTPEFDSLFSG
      DPIWATEVIGGMGLDGR TLVTKNSFRYLHTLHTM
      GPAPEPNLTILWSEALP VAFKKYA
      AQVSIVTSSLO YENDDLMR TD FNSDDYAIACCVS
      PMVIGKQM QFFGARANLAKTLLYA
      INGGVDEKLKIQVGPKTAPLTDEVLDYDAVMESL
      DHFMDWLAVQYISALNI IHYMHDK
      YSYEASLMALH DRDVYRTMACGIAGLSVAADSLS
      AIRYAQVKPIRDENGLAIDFAIEG
      EYPQYGNNDERVDSIACDLVKRFMQKISVLPTYR
      NAVPTQSILTITSNVVYGQKTGNT
      PDGRRAGTPFAPGANPMHGRDRKGAVASLT SVAK
      LPFTYAKDGISYTF SIVPAALGKE
      DAVRKTNLVGLLDGYFHHEAQVEGGQHLNVNVMN
      REMLLDAIEHPENYPNL TIRVSGY
      AVRFNAL TREQQQDVISRTFTQAM"
      /gene="tdcE"
misc-feature complement (57993..58331 /note="Pfam match to entry PF01228
)      Gly-radical, Glycine radical,
      score 233.10, E-value 4e-66"
misc-feature complement (58005..58031 /gene="tdcE"
)
      /note="PS00850 Glycine radical
      signature"
gene      complement (60264..61472 /gene="tdcD"
)
CDS      complement (60264..61472 /note="synonym: STY3424"
)      /gene="tdcD"
      /EC-number="2.7.2.-"

```

```

propionate kinase TdcD
SW:TDCC-ECOLI (P11868; P76666)
(402 aa) fasta scores: E(): 0,
82.1% id in 402 aa Fasta hit to
ACKA-ECOLI (400 aa), 41% identity
in 396 aa overlap"
/codon-start=1
/transl-table=11
/product="propionate kinase"
/protein-id="CAD07766.1"
/db-xref="GI:16504316"
/db-xref="GOA:Q8Z3K5"
/db-xref="SWISS-PROT:Q8Z3K5"
/translation="MNEFPVVLVINCGSSSIKFS
VLDVATCDVLMAGIADGMNTENAF
LSINGDKPINLSHSNYEDALKAIAFELEKRDLT
SVALIGHRIAHDGELFTQSVIITD
EIIDNIRRVSPPLAPLHNYANLSGIDAARRLFPAV
RQVAVFDTSFHQTLAPEAYLYGLP
WEYFSSLGVRRYGFHGTSHRYVSRRAYELLDLDE
KNSGLIVAHLGNGASICAVRNGQS
VDTSMGMTPLEGLMMGTRSGDVDFGAMAWIAKET
GQTLSDLERVVNKESGLLGISGLS
SDLRVLEKAWHEGHERARLAIKTFVHRIARHIAG
HAASLHRLDGIIIFTGGIGENSVLI
RQLVIEHLGVLGLTLDVEMNKQPNSHGERIISVN
PSQVICAVIPTNEEKMIALDAIHL
GNVKAPVEFA"
misc-feature    complement(60312..61457 /gene="tdcD"
)
/note="Pfammatch to entry PF00871
Acetate-kinase, Acetokinase
family, score 732.00, E-value
2.6e-216"
misc-feature    complement(60825..60878 /gene="tdcD"
)
/note="PS01076 Acetate and
butyrate kinases family signature
2"
misc-feature    complement(61419..61454 /gene="tdcD"
)
/note="PS01075 Acetate and
butyrate kinases family signature
1"
gene            complement(61539..62869 /gene="tdcC"
)
/note="synonym: STY3426"
/pseudo
CDS             complement(61539..62869 /gene="tdcC"
)
/note="Similar to Escherichia coli
threonine/serine transporter TdcC
SW:TDCC-ECOLI (P11867) (443 aa)
fasta scores: E(): 0, 95.0% id in
259 aa. Contains a frameshift
after codon 260. The sequence has
been checked and is believed to be
correct"
/pseudo
/codon-start=1
/transl-table=11
/product="threonine/serine
transporter (pseudogene)"
gene            complement(62890..63879 /gene="STY3427"
)
/note="synonym: tdcB"
CDS             complement(62890..63879 /gene="STY3427"
)
/note="Orthologue of E. coli tdcB
(THD2-ECOLI); Fasta hit to
THD2-ECOLI (329 aa), 95% identity
in 329 aa overlap"
/codon-start=1
/transl-table=11
/product="catabolic threonine

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FISWFPMLLLIGVWIFFMRQMGGGGKGAMSFGK
SKARMLTEDQIKTTFADVAGCDEA
KEEVAELVEYLREPSRFQKLGGKIPKGVLMVGPP
GTGKTL LAKA IAGEAKVPFFTISG
SDFVEMFVGVGASVRDMFEQAKKAAPCIIFIDE
IDAVGRQRGAGLGGGHDEREQTLN
QMLVEMDGFEGNEGIIVIAATNRPDVLDPALLRP
GRFDRQVVVGLPDVRGREQILKVH
MRRVPLATDIDAII IARGTPGFSGADLANLVNEA
ALFAARGNKRVSVMVEFEKAKDKI
MMGAERRSMVMTEAQKESTAYHEAGHAIIGRLVP
EHDPVHKVTIIPRGALGVTFPLP
EGDAISASRQKLESQISTLYGGR LAEEIIYGV E
VSTGASNDIKVATNLARNMVTQWG
FSEKLGPLLYAEEEEGEVFLGRSVAKAKHMSDETA
RIIDQEVKALIERNYNRARQILTD
NMDILHAMKDALMKYETIDAPQIDDLMARREVRP
PAGWEDPNGTNNSDSNGTPQAPRP
VDEPRTPNPGNTMSEQLGDK"
misc-feature      complement(113372..1140
10)                /gene="STY3474"
                  /note="Pfam match to entry PF01434
                  Peptidase-M41, Peptidase family
                  M41, score 443.90, E-value
                  1.4e-129"
misc-feature      complement(114026..1145
89)                /gene="STY3474"
                  /note="Pfam match to entry PF00004
                  AAA, ATPases associated with
                  various cellular activities (AAA),
                  score 352.20, E-value 5.4e-102"
misc-feature      complement(114221..1142
77)                /gene="STY3474"
                  /note="PS00674 AAA-protein family
                  signature"
misc-feature      complement(114551..1145
74)                /gene="STY3474"
                  /note="PS00017 ATP/GTP-binding
                  site motif A (P-loop)"
misc-feature      complement(114737..1147
60)                /gene="STY3474"
                  /note="PS00017 ATP/GTP-binding
                  site motif A (P-loop)"
gene              complement(115251..1158
77)                /gene="STY3475"
                  /note="synonym: ftsJ"
CDS               complement(115251..1158
77)                /gene="STY3475"
                  /note="Orthologue of E. coli ftsJ
                  (FTSJ-ECOLI); Fasta hit to
                  FTSJ-ECOLI (209 aa), 100% identity
                  in 208 aa overlap"
                  /codon-start=1
                  /transl-table=11
                  /product="cell division protein"
                  /protein-id="CAD07814.1"
                  /db-xref="GI:16504362"
                  /db-xref="GOA:Q8Z3H3"
                  /db-xref="SPTREMBL:Q8Z3H3"
                  /translation="MTGKKRSASSSRWLQEHFSD
                  KYVQQAQKKGLRSRAWFKLDEIQQ
                  SDKLFPKPGMTVVDLGAAPGGWSQYVVVTQIGGKGR
                  IIACDLLPMDPIVGVDLQGDGRD
                  ELVMKALLERVGDSKVQVMSDMAPNMSGTPAVD
                  IPRAMYLVELALDMCRDVLAPGGS
                  FVVKVFQGEFDEYLRIRSLFTKVKVRKPDSSR
                  ARSREVYIVATGRK"
misc-feature      complement(115254..1158
35)                /gene="STY3475"
                  /note="Pfam match to entry PF01728
                  FtsJ, FtsJ cell division protein,
                  score 367.20, E-value 1.7e-106"
gene              115965..116297
CDS               115965..116297
                  /gene="STY3476"
                  /note="Orthologue of E. coli yhbY

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YHBY-ECOLI (97 aa), 96% identity in 97 aa overlap. Note codon 14 offers an alternative translational start site."
/codon-start=1
/transl-table=11
/product="conserved hypothetical protein"
/protein-id="CAD07815.1"
/db-xref="GI:16504363"
/db-xref="GOA:Q8XG58"
/db-xref="SPTREMBL:Q8XG58"
/translation="MTRFQSQRKQKYTMNLSTKQ KQHLKGLAHPLKPVVMLGNNGLTE GVLAIEIEQALEHHELIKVKIASEDRETKTLIVDA IVRETGACNVQVIGKTLVLYRPTK ERKISLPR"
/gene="STY3476"
/note="PS01301 Uncharacterized protein family UPF0044 signature"
/gene="STY3476"
/note="Pfam match to entry PF01985 UPF0044, Uncharacterised protein family UPF0044, score 27.60, E-value 0.00026"
E-value 0.00026"
/gene="STY3477"
/note="synonym: greA"
/gene="STY3477"
/note="Fasta hit to GREB-ECOLI (158 aa), 35% identity in 155 aa overlap Orthologue of E. coli greA (GREB-ECOLI); Fasta hit to GREB-ECOLI (158 aa), 97% identity in 158 aa overlap"
/codon-start=1
/transl-table=11
/product="transcription elongation factor"
/protein-id="CAD07816.1"
/db-xref="GI:16504364"
/db-xref="GOA:Q8XGQ9"
/db-xref="SWISS-PROT:Q8XGQ9"
/translation="MQAIPMTLRGAEKLREELDF LKSVRRPEIIAAIAEAREHGDLE NAEYHAAREQQGFCEGRIKDIEAKLSNAQVIDVT KMPNNGRVIFGATVTVNLNLDDEE QTYRIVGDDEADFKQNLISVNSPIARGGLIGKEQD DVVVIKTPGGDVEYEVLEKVEYL"
/gene="STY3477"
/note="Pfam match to entry PF01272 GreA-GreB, Prokaryotic transcription elongation factor, GreA/GreB, score 365.40, E-value 5.8e-106"
/gene="STY3477"
/note="PS00830 Prokaryotic transcription elongation factors signature 2"
/gene="STY3477"
/note="PS00829 Prokaryotic transcription elongation factors signature 1"
/gene="STY3479"
/gene="STY3479"
/note="Orthologue of E. coli dacB (PBP4-ECOLI); Fasta hit to PBP4-ECOLI (477 aa), 94% identity in 477 aa overlap"
/codon-start=1
/transl-table=11
/product="Penicillin-binding

misc-feature	116010..116087	
misc-feature	116049..116261	
gene	complement(116453..116929)	
CDS	complement(116453..116929)	
misc-feature	complement(116456..116929)	
misc-feature	complement(116519..116569)	
misc-feature	complement(116786..116911)	
gene	117177..118610	
CDS	117177..118610	

		carboxypeptidase) "
		/protein-id="CAD07817.1"
		/db-xref="GI:16504365"
		/db-xref="GOA:Q8Z3H2"
		/db-xref="SPTREMBL:Q8Z3H2"
		/translation="MRFSRFIIIGLTTIAFSVQA ANIDEYIKQLPAGANLALMVQKIG APAPAIIDYHSQQMALPASTQKVITALAALIQLGP DFRFTTTLETGKGNVDNGILKGDLI ARFGGDPTLRRQDIRNMVATLKKSGVTQIDGNVL IDTSIFASHDKAPGWPWDLTQCF SAPPAAAIIVDRNCFVSLSYSAQKPNDLAFIRVAS YYPVTMFSSQVRTLPRGSADAQYCE LDVVPGLNRYTLTGCLPQRADPLPLAFAIQDGA SYAGAILKQELKEAGITYRGTLR QTQVNEPGTIVASKQSAPLHDLKIMLKSDNMI ADTVFRMIGHVRFNVPGTWRAGSD AVRQILRQQAGIDIGNTIIADGSGLSRHNLIAPA TMMQVLQYIAQHDNELNFISMLPL AGYDGSLOQRAGLHQAGVDGKVS AKTGSLOQGVYN LAGFITTASGQRMFAVQYLSGYAV PPADQRNRRIPLVRFESRLYKDIYQNN"
misc-feature	117354..118514	/gene="STY3479"
		/note="Pfam match to entry PF02113 Peptidase-S13, D-Ala-D-Ala carboxypeptidase 3 (S13) family, score 713.90, E-value 7.3e-211"
gene	complement(118741..1199 13)	/gene="STY3480"
CDS	complement(118741..1199 13)	/gene="STY3480"
		/note="Orthologue of E. coli yhbZ (YHBZ-ECOLI); Fasta hit to YHBZ-ECOLI (390 aa), 96% identity in 390 aa overlap" /codon-start=1 /transl-table=11 /product="probable GTP-binding protein" /protein-id="CAD07818.1" /db-xref="GI:16504366" /db-xref="SPTREMBL:Q8Z3H1" /translation="MKFVDEASILVVAGDGGNGC VSFRREKYIPKGGPDGGDGGDGGD VWMEADENLNTLIDYRFEKSFRAERGQNGASRDC TGKRGKDVTIKVPVGTVIDQGTG ETMGDMTKHGQRLLVAKGGWHGLGNTRFKSSVNR TPRQKTNGTPGDKRDLLLELMLLA DVGMLGMPNAGKSTFIRAVSAAKPKVADYPFTTL VPSLGVRMDSEKSFVVADIPGLI EGAAEGAGLGIRFLKHLERCRVLLHLIDIDPIDG SDPVENARIIIGELEKYSQDLAAK PRWLVFNKIDLMDKSEAEEKAKAIAEALGWEGKY YLISAASQLGVKDLCDVMTFIE NPISQAEEAKQPEKVEFMWDDYHRQQLAEVEEDA DDDWDDEDEDEEGVEFIYKR"
misc-feature	complement(118759..1198 68)	/gene="STY3480"
		/note="Pfam match to entry PF01018 GTP1-OBG, GTP1/OBG family, score 603.10, E-value 1.7e-177"
misc-feature	complement(119236..1192 77)	/gene="STY3480"
		/note="PS00905 GTP1/OBG family signature"
misc-feature	complement(119395..1194 18)	/gene="STY3480"
		/note="PS00017 ATP/GTP-binding site motif A (P-loop)"
gene	complement(119929..1208 94)	/gene="STY3481"
CDS	complement(119929..1208 94)	/gene="STY3481"
		/note="Orthologue of E. coli yhbE (YHBE-ECOLI); Fasta hit to

in 321 aa overlap. Contains multiple possible membrane spanning hydrophobic domains."
/codon-start=1
/transl-table=11
/product="putative membrane protein"
/protein-id="CAD07819.1"
/db-xref="GI:16504367"
/db-xref="GOA:Q8Z3H0"
/db-xref="SPTREMBL:Q8Z3H0"
/translation="MKQQAGIGILLALTAMCWG
ALPIAMKQVLEVMEPSTIVFYRFL
MASIGLGAILAVKRKLPPLRIFRKPRWLVLIAIA
TCGLFGNFILFSSSLQYLSPTASQ
VIGQLSPVGMVASVFILKEKMRGTQVIGALMLL
SGLVMFFNTSLIEIFTRLTDYTWG
VIFGVGAAMVWVSYGVAQKVLLRRLASQQILFLL
YTLCTIALLLPLAKPMVIAQLSDWQ
LACLIFCGLNTLVGYGALAEAMARWQAAQVSAII
TLTPLFTLLFSDLLSMAWPDFFAR
PMLNLLGYLGAFVVVAGAMYSAIGHRIWGGLRKH
ETVVSQPRSGE"
misc-feature complement(120019..1203 /gene="STY3481"
90)
/Note="Pfam match to entry PF00892
DUF6, Integral membrane protein
DUF6, score 55.10, E-value
1.5e-12"
misc-feature complement(120463..1208 /gene="STY3481"
46)
/Note="Pfam match to entry PF00892
DUF6, Integral membrane protein
DUF6, score 98.80, E-value
1.1e-25"
gene complement(121024..1212 /gene="STY3482"
81)
/Note="synonym: rpmA"
CDS complement(121024..1212 /gene="STY3482"
81)
/Note="Orthologue of E. coli rpmA
(RL27-ECOLI); Fasta hit to
RL27-ECOLI (84 aa), 95% identity
in 84 aa overlap"
/codon-start=1
/transl-table=11
/product="50S ribosomal subunit
protein L27"
/protein-id="CAD07820.1"
/db-xref="GI:16504368"
/db-xref="GOA:Q8XGK4"
/db-xref="SWISS-PROT:Q8XGK4"
/translation="MAHKKAGGSTRNGRDSEAKR
LGVKRFGGEAVLAGSIIVRQRGTK
FHAGTNVGCGRDHTLFAKADGKVKFEVKGPKNRK
YISIVAE"
misc-feature complement(121033..1212 /gene="STY3482"
78)
/Note="Pfam match to entry PF01016
Ribosomal-L27, Ribosomal L27
protein, score 201.00, E-value
1.8e-56"
misc-feature complement(121138..1211 /gene="STY3482"
82)
/Note="PS00831 Ribosomal protein
L27 signature"
gene complement(121301..1216 /gene="STY3483"
12)
/Note="synonym: rplU"
CDS complement(121301..1216 /gene="STY3483"
12)
/Note="Orthologue of E. coli rplU
(RL21-ECOLI); Fasta hit to
RL21-ECOLI (103 aa), 99% identity
in 103 aa overlap"

		/transl-table=11 /product="50S ribosomal subunit protein L21" /protein-id="CAD07821.1" /db-xref="GI:16504369" /db-xref="GOA:Q8XGA0" /db-xref="SPTREMBL:Q8XGA0" /translation="MYAVFQSGGKQHRVSEGQTV RLEKLDIATGETIEFAEVLMIANG EEVKIGVPPFVDGGVIAEVVAHGRGEKVKIVKFR RRKHYRKQQGHRQWFTDVKITGIS A" /gene="STY3483"
misc-feature	complement(121325..121612)	/note="Pfam match to entry PF00829 Ribosomal-L21p, Ribosomal prokaryotic L21 protein, score 202.30, E-value 7.6e-57" /gene="STY3483"
misc-feature	complement(121331..121399)	/note="PS01169 Ribosomal protein L21 signature" /gene="STY3484"
gene	121871..122842	/note="synonym: ispB" /gene="STY3484"
CDS	121871..122842	/note="Orthologue of E. coli ispB (ISPB-ECOLI); Fasta hit to ISPB-ECOLI (323 aa), 96% identity in 323 aa overlap" /codon-start=1 /transl-table=11 /product="octaprenyl-diphosphate synthase" /protein-id="CAD07822.1" /db-xref="GI:16504370" /db-xref="GOA:Q8XFR7" /db-xref="SPTREMBL:Q8XFR7" /translation="MNLEKINELTAQDMAGVNAT ILEQLNSDVQLINQLGYIISGGG KRIRPMIAVLAARAVGYQGNHVITIAALIEFIHT ATLLHDDVVDSDMRRGKATANAA FGNAASVLVGDFIYTRAFQMMTSLGSLKVLEVMS EAVNVIAEGEVLQLMNVNDPDITE ENYMRVIYSKTARLFEAAAQCSGILAGCTPEQEK GLQDYGRYLGTAFLIDDLDDYSA DGEHLGKNVGDDLNEGKPTLPLLHAMRHGTPEQS AMIRTAIEQGNRHLLEPVLEAMT TCGSLEWTRQRAEEEEADKAISALQILPDTPWREA LIGLAHIAVQDR" /gene="STY3484"
misc-feature	121961..122725	/note="Pfam match to entry PF00348 polyprenyl-synt, Polyprenyl synthetases, score 433.30, E-value 2.2e-126" /gene="STY3484"
misc-feature	122111..122155	/note="PS00723 Polyprenyl synthetases signature 1" /gene="STY3484"
misc-feature	122477..122515	/note="PS00444 Polyprenyl synthetases signature 2" /gene="STY3485"
gene	123075..123362	/note="synonym: nlp" /gene="STY3485"
CDS	123075..123362	/note="Orthologue of E. coli Ner-like protein (Nlp) involved in the regulation of sugar metabolism (NLP-ECOLI); Fasta hit to NLP-ECOLI (92 aa), 87% identity in 92 aa overlap" /codon-start=1 /transl-table=11 /product="Ner-like regulatory protein" /protein-id="CAD07823.1" /db-xref="GI:16504371" /db-xref="SPTREMBL:Q8Z3G9"

		SDDVEMMLEANRIGGRHGLGMSDQIENRIIEAKS RGIYEAPGMALLHIAAYERLLTGIH NEDTIEQYHSHGRQLGKLLYQGRWFDSQALMLRD GLQRWVASQITGEVTLELRRGNDY SILNTVSDNLTykaERLTMEKGESVFSPPDRIGQ LTMRNLDTDTREKLFgyAKAGLL TASSATGLPQVENLENKAK" /gene="STY3470" /note="Pfam match to entry PF00764 Arginosuc-synth, Arginosuccinate synthase, score 755.20, E-value 3.5e-237"
misc-feature	108776..109987	
misc-feature	108782..108808	/gene="STY3470" /note="PS00564 Argininosuccinate synthase signature 1"
misc-feature	109118..109153	/gene="STY3470" /note="PS00565 Argininosuccinate synthase signature 2"
tRNA	complement(110275..1103 61)	/product="tRNA-Leu" /note="tRNA Leu anticodon GAG, Cove score 67.81"
gene	complement(110375..1107 07)	/gene="secG" /note="synonym: STY3471"
CDS	complement(110375..1107 07)	/gene="secG" /note="Similar to Escherichia coli protein-export membrane protein SecG secG SW:SECG-ECOLI (P33582) (110 aa) fasta scores: E(): 0, 98.2% id in 109 aa" /codon-start=1 /transl-table=11 /product="protein-export membrane protein" /protein-id="CAD07810.1" /db-xref="GI:16504358" /db-xref="GOA:Q8XGE4" /db-xref="SPTREMBL:Q8XGE4" /translation="MYEALLVVFLIVAIGLVGLI MLQQGKGADMGASFGAGASATLFG SSGSGNFMTRMTAVLATLFFIISLVLGNINSNKT NKGSEWENLSAPAKTEQTQPAAPA QPTSDIPR"
gene	complement(110930..1122 67)	/gene="STY3472"
CDS	complement(110930..1122 67)	/gene="STY3472" /note="Similar to Escherichia coli MrsA protein a phosphoglucomutase (PGM) /phosphomannomutase (PMM) -family protein SW:MRSA-ECOLI (P31120) (445 aa) fasta scores: E(): 0, 96.0% id in 445 aa" /codon-start=1 /transl-table=11 /product="PGM/PMM-family protein" /protein-id="CAD07811.1" /db-xref="GI:16504359" /db-xref="GOA:Q8XF81" /db-xref="SPTREMBL:Q8XF81" /translation="MSNRKYFGTDGIRGRVGNAP ITPDFVLKLGWAAGKVLARHGSRK IIIGKDTRISGYMLESaleAGLAAAGLSASFTGP MPTPAVAYLTRTFRAEAGIVISAS HNPFDYDNGIKFFSIDGTKLPDDVEEAIEAEMEKE ITCVDSAELGKASRIVDAAGRYIE FCKGTFPNELSLNGLKVVVDCANGATYHIAPNVL RELGATVIAIGCEPNGVNINEEVG ATDVRALQARVLAEKADLGIALDGDGDRVIMVDH EGNKVDGDQIMYIIAREGLRQGQL RGGAVGTLMsNMGLELALKQLGIPFARAKVGDRY VLEKLQEKGWRIGAENSGHVILLD KTTTGDGIVAGLQVLAAMVRNHMSLHDLCSGMKM FPQILVNVRYTAGSGDPLENEAVK"

misc-feature	complement(110972..112261)	DEAQVTAFAHRIADAVKAV" /gene="STY3472" /note="Pfam match to entry PF00408 PGM-PMM, Phosphoglucomutase/phosphomannomut ase, score 653.70, E-value 9.4e-193"
misc-feature	complement(111938..111982)	/gene="STY3472" /note="PS00710 Phosphoglucomutase and phosphomannomutase phosphoserine signature"
gene	complement(112260..113108)	/gene="STY3473" /note="synonym: folP"
CDS	complement(112260..113108)	/gene="STY3473" /note="Orthologue of E. coli folP (DHPS-ECOLI); Fasta hit to DHPS-ECOLI (282 aa), 92% identity in 282 aa overlap" /codon-start=1 /transl-table=11 /product="dihydropteroate synthase" /protein-id="CAD07812.1" /db-xref="GI:16504360" /db-xref="GOA:Q8Z3H4" /db-xref="SPTREMBL:Q8Z3H4" /translation="MKLFAQGATLDLTHPHVMGI LNVTPDSFSDGGAHNTLIEAVKHA NLMVNTGATIIDVGGESTRPGAAEVSVVEELDRV IPVLEAIAQRFEVWISVDTSKPEV IREAARAGAHINDVRSLSPEGALEAAAETGLPV SLMHMQGNPKTMQEAPKYDDVFAE VNRYFIEQIARCEKAGIAKEKLLLDPGFGFGKNL SHNYTLLARLGEFHFNLP LLVGM SRKTMVGQLLNVGPSDRLNGSLACAVIAAMQGAQ IIRVHDVKETVEAMRVVEATLSAK GNKRYE"
misc-feature	complement(112296..113057)	/gene="STY3473" /note="Pfam match to entry PF00809 DHPS, Dihydropteroate synthase, score 525.00, E-value 5.5e-154"
misc-feature	complement(112917..112958)	/gene="STY3473" /note="PS00793 Dihydropteroate synthase signature 2"
misc-feature	complement(113013..113060)	/gene="STY3473" /note="PS00792 Dihydropteroate synthase signature 1"
gene	complement(113213..115147)	/gene="STY3474" /note="synonym: ftsH"
CDS	complement(113213..115147)	/gene="STY3474" /note="Orthologue of E. coli (FTSH-ECOLI); Fasta hit to FTSH-ECOLI (644 aa), 98% identity in 644 aa overlap. Contains a possible membrane spanning hydrophobic domain and a possible N-terminal signal sequence." /codon-start=1 /transl-table=11 /product="cell division protein" /protein-id="CAD07813.1" /db-xref="GI:16504361" /db-xref="GOA:Q8XGY2" /db-xref="SWISS-PROT:Q8XGY2" /translation="MAKNLILWLVIADVLMVSVFQ SFGPSESNGRKVDYSTFLQEVNQD QVREARINGREINVTKKDSNRYTTYIPINDPKLL

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/protein-id="CAD07768.1"
/db-xref="GI:16504317"
/db-xref="GOA:Q8Z3K4"
/db-xref="SPTREMBL:Q8Z3K4"
/translation="MHITYDLPVAIEDILEAKKR
LAGKIYKTMGMPRSNYFSEKCKGEI
FLKFENMQRTGSFKIRGA FNKLSSLTEAEKRKGV
VACSTGNHAAQGVSLSCAMLGIDGK
VVMPPKGAPKSKVAATCDYSAEVVLHGDNFNDTIA
KVSEIVETEGRIFIPPYDDPKVIA
GQGTIGLEIMEDLYDVNDVIVPIGGGGLIAGIAI
AIKSINPTIKVIGVQAENVHGMAA
SYYAGEITAHRTTGTLADGCDVSRPGNLTYEIVR
ELVDDIVLVSEDEIRNSMIALIQR
NKVITEGAGALACAALLSGKLD SHIQNRKTVSII
SGGNIDLSRVSQITGLVDA"
/misc-feature complement (62941..63819) /gene="STY3427"
)
/note="Pfam match to entry PF00291
PALP, Pyridoxal-phosphate
dependent enzyme, score 314.00,
E-value 1.8e-90"
/misc-feature complement (63694..63735) /gene="STY3427"
)
/note="PS00165 Serine/threonine
dehydratases pyridoxal-phosphate
attachment site"
/gene complement (63977..64915) /gene="STY3428"
)
/note="synonym: tdca"
CDS complement (63977..64915) /gene="STY3428"
)
/note="Orthologue of E. coli tdca
(TDCA-ECOLI); Fasta hit to
TDCA-ECOLI (312 aa), 89% identity
in 311 aa overlap"
/codon-start=1
/transl-table=11
/product="TDC operon
transcriptional activator"
/protein-id="CAD07769.1"
/db-xref="GI:16504318"
/db-xref="GOA:Q8Z3K3"
/db-xref="SPTREMBL:Q8Z3K3"
/translation="MNTLVLPKTQHLVVFQEVIR
SGSIGSAAKSLGLTQPAVSKIISD
VEAYFGVELIVRKNTGVTLTEAGQVLLSWSESIT
REMKNMINE MNMNTCNTVVDVSFG
FPSLIGFTFMSDMIHKFKEVFPKAQVSMYEAQLS
SFLPALRDGRLDFAIGTLSNEMQL
QDLHVEPLFESEFVLVASKSRTCTGTITLESKLD
EQWALPQTNMGYYSELLTTLQRNG
ISINIVKTDSVVVTIYNLVLNADFLTVIPCDMTT
PFGSNQFITIPIKDTLPVARYAAV
WSKNYRIKKAASVLVELAKQYSSYNGCRRRQLIE
IE"
/misc-feature complement (64463..64891) /gene="STY3428"
)
/note="Pfam match to entry PF00126
HTH-1, Bacterial regulatory
helix-turn-helix protein, lysR
family, score 128.50, E-value
1.2e-34"
/misc-feature complement (64757..64849) /gene="STY3428"
)
/note="PS00044 Bacterial
regulatory proteins, lysR family
signature"
/gene complement (65959..66334) /gene="rnpB"
)
misc-RNA complement (65959..66334) /gene="rnpB"
)
/note="hit to rnpB M1 RNA
component of ribonuclease P 1..377
score: 1818 percent id: 98.67"

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CDS)	complement (66367..67512 /gene="STY3429")	/note="Fasta hit to YBBZ-ECOLI (381 aa), 56% identity in 376 aa overlap Orthologue of E. coli yhaD (YHAD-ECOLI); Fasta hit to YHAD-ECOLI (381 aa), 86% identity in 381 aa overlap"
				/codon-start=1
				/transl-table=11
				/product="conserved hypothetical protein"
				/protein-id="CAD07770.1"
				/db-xref="GI:16504319"
				/db-xref="GOA:Q8Z3K2"
				/db-xref="SPTREMBL:Q8Z3K2"
				/translation="MKIVIAPD SYKESLSAAEVA QAIEKGFREIFPDAQYVSVPVADG GEGTVEAMIAATQGVRAAWVTGPLGEKVKACWG MSGDGKTAFIEMAAASGLALVPPE KRNPLITTSRGTGELILQALESGASNIIIGIGGS ATNDGGAGMMQALGAKLRDANGAD IGYGGGSLHCLSNIDISELDPRLKLCAIRVACDV SNPLIGDNGASRIFGPQKGATEEN IVELDRNLAHYADI IKKSLNVDVKAAPGAGAAGG MGAALMAFLGAELRSGIEIVTAAL NLEEHIDCTLVVTGEGRIDSQSIRGKVPIGVAN VAKKYHKPVIGIAGSLTHDVGIVH HYGIDAVFSVLTRIVTLEEAFRGAFDNIYRASRN VAAALAIGMRSAG"
misc-feature	)	complement (67258..67281 /gene="STY3429"	)	/note="PS00017 ATP/GTP-binding site motif A (P-loop)"
gene	)	complement (67610..68494 /gene="garR")	
CDS	)	complement (67610..68494 /gene="garR"	)	/note="synonym: STY3430"
				/EC-number="1.1.1.60"
				/note="Similar to Escherichia coli 2-hydroxy-3-oxopropionate reductase GarR or B3125 SW:GARR-ECOLI (P23523) (294 aa) fasta scores: E(): 0, 96.9% id in 294 aa Fasta hit to YIHU-ECOLI (298 aa), 37% identity in 280 aa overlap Fasta hit to YGBJ-ECOLI (302 aa), 35% identity in 280 aa overlap Fasta hit to YBBQ-ECOLI (292 aa), 44% identity in 289 aa overlap Orthologue of E. coli yhaE (YHAE-ECOLI); Fasta hit to YHAE-ECOLI (294 aa), 97% identity in 294 aa overlap"
				/codon-start=1
				/transl-table=11
				/product="2-hydroxy-3-oxopropionate reductase"
				/protein-id="CAD07771.1"
				/db-xref="GI:16504320"
				/db-xref="GOA:Q8Z3K1"
				/db-xref="SPTREMBL:Q8Z3K1"
				/translation="MKVGFIFGLGIMGKPM SKNLL KAGYSLVVSDRNPEAIADVIAAGA ETASTAKAIAEQCDAIITMLPNSPHVKEVALGEN GIIEGAKPGTVLIDMSSIAPLASR EISDALKAKGVEMLDAPVSGGEPKAIDGTL SVMV GGDKAIFDKYYDLMKAMAGSVVHT GDIGAGNVTKLANQVIVALNIAAMSEALTLATKA GVNPD LVYQAIRGGLAGSTVLD AK APMVMDRNFKPGFRIDLHIKDLANALDTS HG VGA QLPLTAAV MEMMQALRADGHGND D HSA LACYYEKLAKVEVTR"


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)
gene complement (68526..69296) /note="PS00895
3-hydroxyisobutyrate dehydrogenase
signature"
) /gene="garL"

CDS complement (68526..69296) /note="synonym: STY3431"
) /gene="garL"

/EC-number="4.1.2.-"
/note="Similar to Escherichia coli
5-keto-4-deoxy-D-glucarate
aldolase GarL SW:GARL-ECOLI
(P23522) (256 aa) fasta scores:
E(): 0, 90.6% id in 256 aa Fasta
hit to P76469 (267 aa), 45%
identity in 256 aa overlap"
/codon-start=1
/transl-table=11
/product="5-keto-4-deoxy-D-glucara
te aldolase"
/protein-id="CAD07772.1"
/db-xref="GI:16504321"
/db-xref="GOA:Q8XGF9"
/db-xref="SPTREMBL:Q8XGF9"
/translation="MNNAIFPNKFKAALAAQQVQ
IGCWSALASPIITTEVLGLAGFDWL
VLDGEHAPNDVTTLIPQLMALKGSASAPVVRVPT
NEPVIIKRMLDIGFYNFLIPFVET
QEEAARAVASTRYPPEGIRGVSVSHRANMFGTVP
DYFAQSNKNITIIIVQIESQLGVDN
VDAIAATEGVDGIFVGPSDLAAALGHLGNASHPD
VQQTIQHIFARAKAHGKPCGILAP
VEADARRYLEWGATFVAVGSDLGAFRASTQKLAD
TFKK"

gene 69827..71398 /gene="garD"
CDS 69827..71398 /note="synonym: STY3432"
) /gene="garD"

/EC-number="4.2.1.42"
/note="Similar to Escherichia coli
D-galactarate dehydratase gard or
b3128 SW:GARD-ECOLI (P39829) (523
aa) fasta scores: E(): 0, 93.5% id
in 523 aa Fasta hit to UXAA-ECOLI
(495 aa), 33% identity in 511 aa
overlap"
/codon-start=1
/transl-table=11
/product="D-galactarate
dehydratase"
/protein-id="CAD07773.1"
/db-xref="GI:16504322"
/db-xref="GOA:Q8Z3K0"
/db-xref="SPTREMBL:Q8Z3K0"
/translation="MANIEIROESPSAFYIKVHE
TDNVAIIVNDHGLKAGTRFPDGLE
LTEHIPQGHKVALTDIPAHGEIIRYGEVIGYAVR
DIPRGSWIDESLVELPKAPPLNTL
PLATKVPEPLPPLEGYTFEGYRNADGSVGTKNLL
GITTSVHCVAGVVDYVVKVIERDL
LPKYPNVDGVVGLNHLYGCGVAINAPAAVPIRT
IHNIALNPNFGGEVMVIGLGCEKL
QPERLLEGTEDVPAIAVENASIVRLQDEQHVGFK
SMVDDILRVAERHLTKLNQRQRET
CPASELVVGMQCGGSDAFSGVTANPAVGYSDDL
VRCGATVMFSEVTEVRDAIHLLTP
RAINEAVGKRLLDEMAWYDNYLDMGKTDRSANPS
PGNKKGGLANVVEKALGSIKSGK
SAIVEVLSPGQRPTKRGLIYAATPASDFVCGTQQ
VASGITVQVFTTGRGTPYGLMAVP
VIKMATRTELANRWYDLMDINAGTIATGEETIED
VGWKLFFHILDVASGRKKTFSQW
GLHNQLAVFNPAVPT"

gene complement (71638..72585) /gene="STY3433"
)

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)

		/note="Similar to several Eukaryotic carbohydrate kinases e.g. Lycopersicon esculentum fructokinase fk or frk2 TR:Q42896 (EMBL:U62329) (328 aa) fasta scores: E(): 2.2e-22, 29.0% id in 317 aa" /codon-start=1 /transl-table=11 /product="possible carbohydrate kinase" /protein-id="CAD07774.1" /db-xref="GI:16504323" /db-xref="GOA:Q8Z3J9" /db-xref="SPTREMBL:Q8Z3J9" /translation="MNITIATLSELLVEFLAKKE NQGFSSPGEFWGPYPSPGAPAFAD QVAKLGFRSLLFSCVGNDAFGVMNITRLSRDGVN VQGISVLPNATTGSAFVSYSRQAQ RDFIFNMPDSACGLLSADHLDLTLRQYRHFHIM GSSLFSFRLIDAVRKAISIVKENG GTISFDPNIRKEMLKIREMSQAFEYILDYTDFFL PSDGELDYFGLSKSRDEEKIVARL HKRGIAHVIIKRGARGASYYSKDEQHHVAGYPVK VVDPTGAGDCFGATFVSLFLAGYS VPDALAHANAAGSLAISARGPMEGTSTLAQIKEL MRQQN"
misc-feature	complement(71788..71991)	/gene="STY3433" /note="Pfam match to entry PF00294 pfkB, pfkB family carbohydrate kinase, score 67.30, E-value 3.5e-20"
misc-feature	complement(72076..72480)	/gene="STY3433" /note="Pfam match to entry PF00294 pfkB, pfkB family carbohydrate kinase, score 27.00, E-value 1.5e-07"
misc-feature	complement(73103..73399)	/note="Pfam match to entry PF00455 deoR, Bacterial regulatory proteins, deoR family, score 61.40, E-value 2.6e-16"
misc-feature	complement(73295..73399)	/note="PS00894 Bacterial regulatory proteins, deoR family signature"
gene	73763..74617	/gene="STY3435" /note="synonym: gatY"
CDS	73763..74617	/gene="STY3435" /note="Fasta hit to AGAY-ECOLI (286 aa), 64% identity in 284 aa overlap Fasta hit to P77704 (278 aa), 40% identity in 277 aa overlap Orthologue of E. coli gatY (GATY-ECOLI); Fasta hit to GATY-ECOLI (286 aa), 65% identity in 283 aa overlap" /codon-start=1 /transl-table=11 /product="tagatose-bisphosphate aldolase" /protein-id="CAD07775.1" /db-xref="GI:16504324" /db-xref="GOA:Q8XGZ9" /db-xref="SPTREMBL:Q8XGZ9" /translation="MFIISKNMLQKAQHAGYAV PAFNIHNLETLOVVVETAEMRSP LIVAGTPGTFSYAGMGNIVAIAGDLAREYNLPLA IHLDHHESLADIESKVMAGIRSVM IDGSHFPFEENVALVKSVDVDFCHRYDTSVEAELG RLGGIEDDLVVDSKDALYTNPQQA REFVARTGIDSLAVAIGTAHGMYYAAEPKLDPERL AEIRALVDIPLVLHGASGLPESDI RQAISLGVCKVNVATELKI AFSDALKEYFLQNP

misc-feature	73766..74614	/gene="STY3435" /note="Pfam match to entry PF01116 F-bP-aldolase, Fructose-bisphosphate aldolase class-II, score 494.60, E-value 7.4e-145"
misc-feature	73979..74014	/gene="STY3435" /note="PS00602 Fructose-bisphosphate aldolase class-II signature 1"
misc-feature	74153..74188	/gene="STY3435" /note="PS00806 Fructose-bisphosphate aldolase class-II signature 2"
gene CDS	74628..75542 74628..75542	/gene="STY3436" /gene="STY3436" /note="Similar to Bacillus subtilis 1-phosphofructokinase fruk or fruB SW:K1PF-BACSU (031714) (303 aa) fasta scores: E(): 9.9e-28, 31.8% id in 305 aa" /codon-start=1 /transl-table=11 /product="possible carbohydrate kinase" /protein-id="CAD07776.1" /db-xref="GI:16504325" /db-xref="GOA:Q8Z3J8" /db-xref="SPTREMBL:Q8Z3J8" /translation="MIYTLTLNSAIDMNIFSDPL QPNIVNRTHTTEFCPNGKGVNVAL VLDHFQIPAHILGIFGGFTGHYIVESLRTRKMPV TPAWVEEPTRINIFIHDGKOEYKL VNPGSYIPDECKKQIITIISQLPDAEYLVISGSL PQGIESRFYAEIMHICQOKNIGVI LDISHPSLRQLLEFKPLLIKPNDEEVKAIFGLTV SDDNDAKNTLTTLHALGAQNVLLT LGAKGMYFSNGIDYWFCAPTVDLVSSACAGDAA LAAFLSQWLSTGEVEYALSLASAT GADVASSAGLGQLAAIETLLSQIHVRKL"
misc-feature	75006..75392	/gene="STY3436" /note="Pfam match to entry PF00294 pfkB, pfkB family carbohydrate kinase, score 67.00, E-value 4.2e-20"
gene CDS	75569..76996 75569..76996	/gene="STY3437" /gene="STY3437" /note="Similar to Escherichia coli PTS system, fructose-like-1 IIBC component FrvB SW:PTVB-ECOLI (P32154) (485 aa) fasta scores: E(): 0, 32.4% id in 475 aa. Note, like the example given, the predicted product of this CDS contains only one hydrophilic IIB domain. Contains possible membrane spanning hydrophobic domains. Fasta hit to PTVB-ECOLI (485 aa), 32% identity in 474 aa overlap Paralogue of E. coli fruA (PTFB-ECOLI); Fasta hit to PTFB-ECOLI (563 aa), 42% identity in 471 aa overlap" /codon-start=1 /transl-table=11 /product="PTS system, sugar phosphotransferase enzyme IIBC component" /protein-id="CAD07777.1" /db-xref="GI:16504326" /db-xref="GOA:Q8Z3J7" /db-xref="SPTREMBL:Q8Z3J7" /translation="MKKIIAVTGCPGTGIAHTFMA EEALKNAAKKLSVEIKVETNGASG VENAIQPADLVDIAGVIIAADKDVLPDRFNGLPV"

gene	76983..77789	PIRKGESTTSTEIEKESLGRQIYKHLMSGVSNM
CDS	76983..77789	LPFVVAGGILIAVSLWGIYSADP
		NSAEYNATAAMLKIGQQAFSIMVPVFTAYIAFS
		ISGRPGMVAGFVGGLLANTTGAGF
		LGGIAGFAAGYMLWVKNRLEGLPRQYEGLKSI
		FIMPLIGVLVIGVLSLLGQPVAA
		INNSMMNWLASLQEANPILLGIVVGAMCSFDFGG
		PVNKAAAYVTGTLTLLGQGNFYFMAG
		VSAACITPPLVIALATTTFFPKGFSEEERAAGMVN
		YILGCTHITEGAIPFAAKDPLRVI
		PMMMIASSISAVLSYSLRIQVPAPHGGFLILPLV
		SQPLAWVLCILAGSACGAMMLGLW
		RLWAVRKNSVNTTPVAKAGGQNAAL"
		/gene="STY3438"
		/gene="STY3438"
		/note="This CDS is similar to the
		phosphotransferase enzyme IIA and
		HPr (phosphoryl carrier protein)
		domains of PTF family sugar
		transport proteins , e.g. the
		N-terminus of Xanthomonas
		campestris multiphosphoryl
		transfer protein FruB
		SW:PTF1-XANCP (P45597) (837 aa)
		fasta scores: E(): 2.9e-22, 36.0%
		id in 225 aa Parologue of E. coli
		fruB (PTFA-ECOLI); Fasta hit to
		PTFA-ECOLI (376 aa), 36% identity
		in 372 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="PTS-transport family
		phosphoryl transfer protein"
		/protein-id="CAD07778.1"
		/db-xref="GI:16504327"
		/db-xref="GOA:Q8Z3J6"
		/db-xref="SPTREMBL:Q8Z3J6"
		/translation="MQLCEHDIFISDERLDKVT
		LHRVVEKLSAAGNTTPDYLRGMLD
		REAQISTYLGNGIAIPHGTPESRDAVLQTGVKVI
		VFRHGVDWGDGNTAYLVTGIAARS
		NEHLEILRQLTRVLSDDAILQALAKAESPSQVLA
		LLTGSTTNTPAAMELHEGEQATFV
		IHNPHGLHARPSAVLVKFIKQFQSHITVENLDNA
		SGPVDGKNLMRVVSLGAKKGHRL
		FRAQGEDAQALREIGELIASGAGEMITVPVTPP
		PEVMQPKRSWLSRLFN"
misc-feature	77040..77216	/gene="STY3438"
		/note="Pfam match to entry PF00359
		PTS-EIIA-2,
		phosphoenolpyruvate-dependent
		sugar phosphotransferase system,
		EIIA 2, score 79.50, E-value
		6.1e-21"
misc-feature	77118..77168	/gene="STY3438"
		/note="PS00372 PTS EIIA domains
		phosphorylation site signature 2"
misc-feature	77445..77681	/gene="STY3438"
		/note="Pfam match to entry PF00381
		PTS-HPr, PTS HPr component
		phosphorylation sites, score
		115.00, E-value 1.5e-30"
misc-feature	77478..77501	/gene="STY3438"
		/note="PS00369 PTS HPR component
		histidine phosphorylation site
		signature"
gene	77987..79258	/gene="STY3439"
		/pseudo
CDS	77987..79258	/gene="STY3439"
		/note="Similar to Escherichia coli
		putative tagatose 6-phosphate
		kinase gatz SW:GATZ-ECOLI () (420
		aa) fasta scores: E(): 0, 76.1% id
		in 331 aa. Note contains a stop
		codon after codon 331. The

		believed to be correct"
		/pseudo
		/codon-start=1
		/transl-table=11
		/product="putative sugar kinase
		(pseudogene)"
gene	79273..79737	/gene="STY3441"
		/note="synonym: gatA"
CDS	79273..79737	/gene="STY3441"
		/note="Orthologue of E. coli gatA
		(PTKA-ECOLI); Fasta hit to
		PTKA-ECOLI (150 aa), 63% identity
		in 150 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="PTS system,
		galactitol-specific IIA component"
		/protein-id="CAD07780.1"
		/db-xref="GI:16504328"
		/db-xref="GOA:Q8Z3J5"
		/db-xref="SPTREMBL:Q8Z3J5"
		/translation="MSQLFVRTGITFDSSQQALA
		HIGKEMLAKGVVHDSYPQALVERE
		ASFPTGIALERHAVAIPHCEAVHAKSPAIIYLIRP
		DKPVMFQQADDDEEIAVSLIIALI
		VENPAAQLKLLRRLFGALQIPDTIEALLSAPDAE
		LASCFEHKVLTAEQCVQV"
gene	79768..80052	/gene="STY3442"
		/note="synonym: gatB"
CDS	79768..80052	/gene="STY3442"
		/note="Orthologue of E. coli gatB
		(PTKB-ECOLI); Fasta hit to
		PTKB-ECOLI (94 aa), 79% identity
		in 94 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="PTS system,
		galactitol-specific IIB component"
		/protein-id="CAD07781.1"
		/db-xref="GI:16504329"
		/db-xref="GOA:Q8Z3J4"
		/db-xref="SPTREMBL:Q8Z3J4"
		/translation="MKRKVIVACGGAVATSTMAA
		EEIKELCDANHIELDLVQCRVTEI
		ETYMDGADLICTTARVDRAFGDIPVVHGMFPVSG
		VGIEALQQKILSILMG"
gene	80056..81429	/gene="STY3443"
		/note="synonym: gatC"
CDS	80056..81429	/gene="STY3443"
		/note="Fasta hit to SGCC-ECOLI
		(437 aa), 43% identity in 432 aa
		overlap Orthologue of E. coli gatC
		(PTKC-ECOLI); Fasta hit to
		PTKC-ECOLI (451 aa), 85% identity
		in 446 aa overlap. Contains
		possible membrane spanning
		hydrophobic domains."
		/codon-start=1
		/transl-table=11
		/product="PTS system,
		galactitol-specific IIC component"
		/protein-id="CAD07782.1"
		/db-xref="GI:16504330"
		/db-xref="GOA:Q8Z3J3"
		/db-xref="SPTREMBL:Q8Z3J3"
		/translation="MFSEIMRYILDGPTVMLPL
		VIIIVFSKLLGMKLGDCFKSGLHIG
		IGFVGIGLVIGLMLDSIGPAAKAMAEHFQINLHV
		IDVGWPGSSPMTWASQIALVAIPV
		AIGVNVLMMLVTRMTRVVNVDIWNHMTFTGAML
		HLATGSYWLGLGVVHAAAFVYKL
		GDWFAKDTRDYFGLEGIAIPHGSSAYLSPVAVLV
		DTIIEKIPGLNRIHFSADDVQKRF
		GPFGEPTVTVGFVMGLVIGVLAGYDTKAVLQ LAVK
		TAAVMLLMPRVIKPIMDGLTPIAK

gene 81473..82516
CDS 81473..82516

misc-feature 81503..82510

misc-feature 81644..81688

gene 82627..83400

CDS 82627..83400

LIFIPLTILIAVLVPGNQVLPGD
LATIGFFIAMAVAVHQGNLFRTLISGVIIMGITL
WIATQTIGLHTQLAANAGALKAGA
QVASLDQGGSPITWLLIQLFTWQNIWGFVIAII
YLAGVLLTWRRARQFVAAEKATAL QQSQIAS"
/gene="STY3444"
/note="synonym: gatD"
/gene="STY3444"
/note="Fasta hit to YDJJ-ECOLI
(347 aa), 32% identity in 338 aa
overlap Orthologue of E. coli gatD
(GATD-ECOLI); Fasta hit to
GATD-ECOLI (346 aa), 68% identity
in 344 aa overlap"
/codon-start=1
/transl-table=11
/product="galactitol-1-phosphate
dehydrogenase"
/protein-id="CAD07783.1"
/db-xref="GI:16504331"
/db-xref="GOA:Q8Z3J2"
/db-xref="SPTREMBL:Q8Z3J2"
/translation="MKSIVIHAEGDVRVEERPLP
QLQAEDDVLVKVSSGLCGSDIPR
IFAQGAHYYPITLGHEFSGYVESYGTGVTDMQPG
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CKQYQFVGSRSEGGNAEYVVVKRANLFRLPSPDMP
IEDGAFIEPITVGLHAFHLAQGCE
GKNVIVGAGTIGLLALQCARELGARSVTAIDIN
PQKLELAKALGATHTCNSREMTAD
DIQTALSDIQFDQLVLETAGTPQTVSLAIDITGP
RAQLALVGTLLHDLTLTTRTFGLI
LRKELTLLGSWMNYSAPWPGEWETAARLLAEKR
LQLTPLIAHRGDAESFAEAVKALN
GAPMQGKILLQLS"
/gene="STY3444"
/note="Pfam match to entry PF00107
adh-zinc, Zinc-binding
dehydrogenases, score 285.90,
E-value 5.2e-82"
/gene="STY3444"
/note="PS00059 Zinc-containing
alcohol dehydrogenases signature"
/gene="STY3445"
/note="synonym: gatR"
/gene="STY3445"
/note="Fasta hit to SRLR-ECOLI
(257 aa), 37% identity in 257 aa
overlap Fasta hit to YGBI-ECOLI
(265 aa), 32% identity in 253 aa
overlap Fasta hit to YCIT-ECOLI
(249 aa), 31% identity in 261 aa
overlap Fasta hit to AGAR-ECOLI
(269 aa), 36% identity in 254 aa
overlap Fasta hit to FUCR-ECOLI
(243 aa), 31% identity in 236 aa
overlap Fasta hit to GLPR-ECOLI
(252 aa), 32% identity in 241 aa
overlap Orthologue of E. coli
gatR-2 (GATR-ECOLI); Fasta hit to
GATR-ECOLI (259 aa), 73% identity
in 257 aa overlap"
/codon-start=1
/transl-table=11
/product="galactitol utilization
operon repressor"
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/db-xref="GI:16504332"
/db-xref="GOA:Q8Z3J1"
/db-xref="SPTREMBL:Q8Z3J1"
/translation="MNSFERRNKIVDLINTQGSV
LVMDLSNTFGISEVTIRADLRLLLE
EKGLVTRFRHGGAAKPGSHLAEGDNQEVILEDYRQ
LASDPKKRIAQAAAAMVEEGMTII
LDSGSTTLLIAEALARKSNITVITNSLPAAFTLS

		IAERSLHGISADVMFVGADGIDATNGITTFNEGY SISGVMAAAAHKVI AVL DATKFNR RGFNQVLPMDKIDCVITDDTISKQDKAALAKTGV ELMIV"
misc-feature	82642..83334	/gene="STY3445" /note="Pfam match to entry PF00455 deoR, Bacterial regulatory proteins, deoR family, score 255.80, E-value 5.8e-73"
misc-feature	82642..82746	/gene="STY3445" /note="PS00894 Bacterial regulatory proteins, deoR family signature"
gene	complement(83558..84421	/gene="STY3446"
CDS	) complement(83558..84421	/gene="STY3446"
	)	/note="Orthologue of E. coli yraL (YRAL-ECOLI); Fasta hit to YRAL-ECOLI (286 aa), 97% identity in 285 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07785.1" /db-xref="GI:16504333" /db-xref="GOA:Q8Z3J0" /db-xref="SPTREMBL:Q8Z3J0" /translation="MKQNESADNSQGQLFIVPTP IGNLADITQRALEV LQAVDLIAAE DTRHTGLLLQHFGINARLFALHDHNEQQKAETLV AKLKEGQNIALVSDAGTPLINDPG YHLVRTCREAGIRVVPLPGPCAAITALSAAGLPS DRFCYEGFLPAKSKGRDALKAE AEPRTLIFYESTHRL L D S L E D M V A V W G E S R Y V V L ARELTKTWETIHGAPV G E L L A V K EDENRRKGEMVLIVEGHKAQEDDLPADALRTLAL LQAE L P L K K A A L A E I H G V K K N A LYKYALAAQQEE"
misc-feature	complement(83780..84385	/gene="STY3446"
	)	/note="Pfam match to entry PF00590 TP-methylase, Tetrapyrrole (Corrin/Porphyrin) Methylases., score 239.80, E-value 3.8e-68"
misc-feature	complement(84116..84151	/gene="STY3446"
	)	/note="PS01296 Uncharacterized protein family UPF0011 signature"
gene	84485..86536	/gene="STY3447"
CDS	84485..86536	/gene="STY3447" /note="Orthologue of E. coli yram (YRAM-ECOLI); Fasta hit to YRAM-ECOLI (678 aa), 79% identity in 684 aa overlap. Contains a possible N-terminal signal sequence." /codon-start=1 /transl-table=11 /product="possible exported protein" /protein-id="CAD07786.1" /db-xref="GI:16504334" /db-xref="SPTREMBL:Q8Z3I9" /translation="MVPSTFSRLNAARALPVVLA ALLFAGCGTQAPDQSAAYMQGSAQ ADSAFYLHQMQQSADDSKTNWQLLAIHALLKEGK SQQAVELFNQPPQNLNDTQRREQS LLAVEIKLAQKDVAGAQA L L D K L K P A D F A P H Q Q A RYWQAQIVASQGRPSLTLLRALIA QEPLLAKEKQKNIDATWQALSAMTPDQARTLVI NADENVLQGWLDLQRVWFDNRNDP DMLKAGIADWQKRYPNPGAKMLPTQLVNVQRFK PASTSKIALLLPLNGQAAVFGRTI

		QPQMTNGVASPSQASVRDLTDDAP SQSATPVSAPOTPPAQPATASAPADPSAELKIYD TSSQPLDQVLAQVQQDGASIVVGP LLKNNVEALMKSNTPLNVLALNQPETVRSFPNIC YFALSPEDEARDAAHHIYEQKQS PLLLI PRSALGDRVANAFQTQEWQKLGGGIVLQQK FGSVAELKMGVNGGAGIALTGSPV AASVPAQPGVTIGGLTIPAPPTDAQITGGGRVDA VYILATPEEIGFIKPMIAMRNGTQ SGATLYASSRSAQGTSGPDFRLEMEGLQYSEIPM LAGGNTPLMQQALS AVHNDYSLAR MYAMGVDAWTLANHFSSQMROVQGFENGNTGALT ASPDCVINRKLKSLWKYQQGEIVPA S" /gene="STY3447" /note="PS00017 ATP/GTP-binding site motif A (P-loop)" /gene="yran" /note="synonym: STY3448" /gene="yran" /note="Similar to Escherichia coli hypothetical 14.8 kDa protein in agai-mtr intergenic region yran SW:YRAN-ECOLI (P45465) (131 aa) fasta scores: E(): 0, 82.4% id in 131 aa, and to Haemophilus influenzae hypothetical protein Hi1656 hi1656 SW:YRAN-HAEIN (P45300) (119 aa) fasta scores: E(): 4e-19, 53.2% id in 109 aa, and to Xylella fastidiosa hypothetical protein Xf0554 xf0554 TR:Q9PFV3 (EMBL:AE003902) (121 aa) fasta scores: E(): 3.9e-17, 49.1% id in 116 aa Similar to the C-terminal of E. coli SW:YRAN-ECOLI" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07787.1" /db-xref="GI:16504335" /db-xref="SWISS-PROT:Q8Z3I8" /translation="MAQIPARGDCSRQLTRKQAG DAWEAAARLWLESKGLRFIAANVR ERGGEIDLIMRDGKTTVFVEVRYRRSGLYGAAA SVTRSKQHKLHLHTARLWLRQNGS FDTVDCRFDVLAFTGNEIEWFRDAFNDHS" /gene="yran" /note="Pfam match to entry PF02021 UPF0102, Uncharacterised protein family UPF0102, score 192.20, E-value 8.1e-54" /gene="STY3449" /gene="STY3449" /note="Similar to Methanococcus jannaschii probable phosphoheptose isomerase lpca or gmha or mjl335 SW:LPCA-METJA (Q58731) (187 aa) fasta scores: E(): 3.3e-27, 42.5% id in 186 aa Fasta hit to LPCA-ECOLI (192 aa), 42% identity in 166 aa overlap Orthologue of E. coli yraO (YRAO-ECOLI); Fasta hit to YRAO-ECOLI (196 aa), 98% identity in 194 aa overlap" /codon-start=1 /transl-table=11 /product="probable phosphoheptose isomerase" /protein-id="CAD07788.1" /db-xref="GI:16504336" /db-xref="GOA:Q8Z3I7" /db-xref="SPTREMBL:Q8Z3I7" /translation="MLERIKVCFTESIQTQIAAA
misc-feature	84698..84721	
gene	86494..86889	
CDS	86494..86889	
misc-feature	86557..86841	
gene	86911..87501	
CDS	86911..87501	

		LCCGNGTSAANAQHFASMINRFETERPSLPAIA LNTDENVVLTAIANDRLHDEVYAKQ VRALGHAGDVLLAISTRGNSRDIVKAVEAAVTRD MTIVALTGVDGGELAGLLGPQDVE IRIPSHHSARIQEMHMLTVNCLCGLIDNTLFPHQ DD"
misc-feature	87013..87489	/gene="STY3449" /note="Pfam match to entry PF01380 SIS, SIS domain, score 157.10, E-value 3.1e-43"
gene	87511..88086	/gene="STY3450"
CDS	87511..88086	/gene="STY3450" /note="Fasta hit to OSMY-ECOLI (201 aa), 32% identity in 183 aa overlap Orthologue of E. coli yrap (YRAP-ECOLI); Fasta hit to YRAP-ECOLI (191 aa), 93% identity in 191 aa overlap. Contains a possible N-terminal signal sequence." /codon-start=1 /transl-table=11 /product="possible lipoprotein" /protein-id="CAD07789.1" /db-xref="GI:16504337" /db-xref="SPTREMBL:Q8XG47" /translation="MKAFSPLAVLISALLLQGCV AAAVVGTAAVGTKAATDPRSVGTQ VDDGTLELRVSSALS KDEQIKKETRINVTAYQ GK VLLVGQSPNSELSARAKQIAMGVE GTTEVYNEIRQGQPIGLGTASNDTWITTKVRSQ L LTSDQVKSSNVKVT TENG EVFL LG LVTEREGKAAADIASRVSGVKRVTTAFTYIK"
misc-feature	87535..87567	/gene="STY3450" /note="PS00013 Prokaryotic membrane lipoprotein lipid attachment site"
gene	complement(88153..88788)	/gene="STY3451"
CDS	complement(88153..88788)	/gene="STY3451" /note="Orthologue of E. coli yraR (YRAR-ECOLI); Fasta hit to YRAR-ECOLI (226 aa), 88% identity in 210 aa overlap. Note lacks the N-terminal 15 amino acids of the E. coli orthologue." /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07790.1" /db-xref="GI:16504338" /db-xref="SPTREMBL:Q8Z3I6" /translation="MSQVLITGATGLVGGHLLRM LINTPQVSAIAAPTRRPLTDIVGV YNPHDPQLTDALAQVTD PVDIVFCCLGTTRREAG SKAAFIHADYTLVVD TALTGRRLG AQHMLVVSAMGANAHSPFFYNRVKGEMEEALIAQ NWPRLTIARPSMLLGDRTTRRVNE TLFAPLFRLLPGNWKSIDARDVARAMLAEALEPA QEGVTILTSSQLREKAG"
gene	88919..89437	/gene="STY3452"
CDS	88919..89437	/gene="STY3452" /note="Similar to several including: Bacillus subtilis general stress protein 18 yfkm SW:GS18-BACSU (P80876) (171 aa) fasta scores: E(): 0, 64.9% id in 168 aa, and to Pyrococcus furiosus protease I pfpI SW:PFPI-PYRFU (Q51732) (166 aa) fasta scores: E(): 6.5e-24, 47.9% id in 167 aa Orthologue of E. coli yhbO (YHBO-ECOLI); Fasta hit to

		in 172 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="conserved hypothetical protein"
		/protein-id="CAD07791.1"
		/db-xref="GI:16504339"
		/db-xref="SPTREMBL:Q8XH07"
		/translation="MSKKIAVLITDEFEDSEFTS PAAEFROAGHEVITIEKEAGKTVK GKKGEASVTIDKAIDVVRPDEFDALLLPGGHSPD YLRGDSRFVDFTRDFVNSGKPVFA ICHGPQLLISADVIRGRKLTAVKPIIIDVKNAGA EFYDQEVVVVDKDQLVTSRTPDDL PAFNREALRLLGA"
misc-feature	88928..89386	/gene="STY3452"
		/note="Pfam match to entry PF01965 ThiJ, ThiJ/PfpI family, score 296.00, E-value 4.8e-85"
gene	complement(89417..89860	/gene="STY3453"
)	
CDS	complement(89417..89860	/gene="STY3453"
)	
		/note="Orthologue of E. coli yhbP (YHBP-ECOLI); Fasta hit to YHBP-ECOLI (147 aa), 84% identity in 147 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="conserved hypothetical protein"
		/protein-id="CAD07792.1"
		/db-xref="GI:16504340"
		/db-xref="SPTREMBL:Q8XEW3"
		/translation="MDTLTAIGRWLAKQHVVWTC VHHEGELWCANAFYLFDAQNVALY LLTDDKTRHAQMSGACAPVAGTVNGQPKTVARIR GVQFKGEIRRLEGOESDAARKAYL RRFPPVARVLPAPVWEIRLDEIKFTDNTLGFGKKL HWLRDSRAQQA"
gene	89898..90215	/gene="STY3454"
CDS	89898..90215	/gene="STY3454"
		/note="Orthologue of E. coli yhbQ (YHBQ-ECOLI); Fasta hit to YHBQ-ECOLI (100 aa), 81% identity in 100 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="conserved hypothetical protein"
		/protein-id="CAD07793.1"
		/db-xref="GI:16504341"
		/db-xref="GOA:Q8XGW2"
		/db-xref="SWISS-PROT:Q8XGW2"
		/translation="MLMATMTPWYLYLIRTADNA LYTGITTDVARRYRQHQTGKGAKA LRKGELTLAFAAQVGDRSLALRIEYRIKQLTKR QKERLVTEREAFEALLSSLQTPVL KND"
gene	complement(90202..90705	/gene="STY3455"
)	
CDS	complement(90202..90705	/gene="STY3455"
)	
		/note="Similar to Escherichia coli hypothetical protein Yhbs SW:YHBS-ECOLI (P45473) (167 aa) fasta scores: E(): 0, 96.4% id in 167 aa and to Streptomyces coelicolor putative acetyltransferase SCF56.14C TR:Q9RD52 (EMBL:AL133424) (173 aa) fasta scores: E(): 7.7e-07, 30.9% id in 165 aa Orthologue of E. coli YHBS-ECOLI; Fasta hit to YHBS-ECOLI (167 aa), 96% identity in 167 aa overlap"

		/transl-table=11 /product="putative acetyltransferase" /protein-id="CAD07794.1" /db-xref="GI:16504342" /db-xref="GOA:Q8XF87" /db-xref="SPTREMBL:Q8XF87" /translation="MLIRVEIPIDAPGIDALLRR SFESDAEAKLVHDLREDGFLTLGL VATDDEGQVVGYYAFSPVDVQGEDLQVGMAPLA VDEKYRGQGLARQLVYEGLDLSNE FGYYAAVVTLGDPALYSRFGFELAAHYDLHCRWPG TESAFQVHRLAEDALEGVTGLVEY HDHFNRF" /gene="STY3455"
misc-feature	complement(90337..90561)	/note="Pfam match to entry PF00583 Acetyltransf, Acetyltransferase (GNAT) family, score 57.20, E-value 3.6e-13" /gene="STY3456"
gene	complement(90699..91223)	/gene="STY3456"
CDS	complement(90699..91223)	/gene="STY3456"
		/note="Orthologue of E. coli yhbT (YHBT-ECOLI); Fasta hit to YHBT-ECOLI (174 aa), 91% identity in 174 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07795.1" /db-xref="GI:16504343" /db-xref="GOA:Q8Z3I5" /db-xref="SPTREMBL:Q8Z3I5" /translation="MLDKLRSRLVHAGPSLMSVP VKLTPFALKRQVLEQVLSWQFRQA LADGELEFLEGRWLSIHVRDIDLKWTYTTVENEKL IVSQQADADVFSFASDASDLLMIAA RKQDPDTLFFQRRRLVIEGDTELGLYVKNLMDAIE LEQMPKALRIMLLQLADFVEAGMK NSPETKQTSVGEPC" /gene="STY3456"
misc-feature	complement(90816..91136)	/note="Pfam match to entry PF02036 SCP2, SCP-2 sterol transfer family, score 101.00, E-value 2.3e-26" /gene="STY3457"
gene	91440..92435	/gene="STY3457"
CDS	91440..92435	/note="Orthologue of E. coli yhbU (YHBU-ECOLI); Fasta hit to YHBU-ECOLI (331 aa), 97% identity in 331 aa overlap" /codon-start=1 /transl-table=11 /product="putative protease" /protein-id="CAD07796.1" /db-xref="GI:16504344" /db-xref="GOA:Q8XEV5" /db-xref="SPTREMBL:Q8XEV5" /translation="MELLCFAGNLPALKAAIENG ADAVYIGLKDDTNARHFAGLNFTF KKLQEAVSFVHQHRRKLHIAINTFAHPDGYARWQ RAVDMAAQLGADALILADLAMLEY AAERYPHIERHVSQASATNEEAIRFYHRNFDVH RVVLPRVLSIHQVKQLARVTPVPL EVFAFGSLCIMAEGRCYLSSYLTGESPNVTGACS PARFVWRQQTPQGLESRLNDVLID RYQDGENAGYPTLCKGRYLVDGERYHALEEPTSL NTLELLPELMAANIASVKIEGRQR SPAYVSQVAKVWRQAIDRCKAAPQNFVPQRDWME TLGAMSEGTQTTLGAYHRKWQ" /gene="STY3457"
misc-feature	91659..92432	/note="Pfam match to entry PF01136

misc-feature	91920..91976	U32, score 519.00, E-value 3.4e-152" /gene="STY3457" /note="PS01276 Peptidase family U32 signature" /gene="STY3458" /note="synonym: yhbV" /gene="STY3458" /note="Orthologue of E. coli yhbV (YHBV-ECOLI); Fasta hit to YHBV-ECOLI (298 aa), 91% identity in 292 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07797.1" /db-xref="GI:16504345" /db-xref="SPTREMBL:Q8Z3I4" /translation="MKYSLGPVLYYWPKETLEDF YQQAAKSSADIIYLGEAVCSKRRATKVGDWLEMAKSLAASGKQVALSTLALVQASSELSELKRYVDNGDFLLEASDLGVVNLCAERKLPFVAGHALNCYNAVTLRRLKKEGMVRWCMPELSDRDWLVNLLNQDELGIRNQFEVEVLSYGHLPPLAYSARCFTARSEDPRPKDECE TCCIKYPNGRDVLSQENQQVFVLN GIQTMSGVVYNLGNELTSMQGLVDIVRLSPLGTE TFAMLD AFRANENG GAPLP LA AHS DCNGYWKRLAGLELQA"
gene	92444..93322	
CDS	92444..93322	
gene	93500..94507	/gene="STY3459"
CDS	93500..94507	/gene="STY3459" /note="Similar to Escherichia coli hypothetical protein YhbW SW:YHBW-ECOLI (P45529) (335 aa) fasta scores: E(): 0, 94.9% id in 335 aa and to the N-terminus of several monooxygenases e.g. Photobacterium leiognathi alkanal monooxygenase beta chain luxB SW:LXB2-PHOLE (P29239) (326 aa) fasta scores: E(): 4.1e-05, 26.4% id in 193 aa Orthologue of E. coli yhbW (YHBW-ECOLI); Fasta hit to YHBW-ECOLI (335 aa), 95% identity in 335 aa overlap" /codon-start=1 /transl-table=11 /product="possible monooxygenase" /protein-id="CAD07798.1" /db-xref="GI:16504346" /db-xref="GOA:Q8Z3I3" /db-xref="SPTREMBL:Q8Z3I3" /translation="MTDKTIPFSVLDLAPIPEGS SAKEAFTHSLDLARLAEKRGYHRY WLAEHNNMTGIAAATSVLIGYLAANTTTLHLGSGGVMLPNHSPLVIAEQFGTLNTLY PGRIDLGLGRAPGSDQPTMRALRRHMSGDIDNFP RDVAELVDWFDARDPNPHVRPVPGYGEKIP IWL LGSSLYSAQLAAQLGLPFAFASHFT PDMLFQALHLYRTQFKPSARLEKP YAMVCINIIAADSNRDAEFLFTSMQQAFVKLRRGETGQLPPPIENMETFWSPSEQYGV QQALSM SLVGD KAKVRHGLV SILRETQADEIMVN GQIFDHQARLHSFDLAMDVKQELL G"
misc-feature	93521..93781	/gene="STY3459" /note="Pfam match to entry PF00296 bac-luciferase, Bacterial luciferase, score 7.20, E-value 0.1"
gene	complement(94598..95842)	/gene="STY3460"
CDS	complement(94598..95842)	/gene="STY3460" /note="Fasta hit to TNAB-ECOLI"

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overlap Fasta hit to TYRP-ECOLI
(403 aa), 35% identity in 401 aa
overlap Orthologue of E. coli mtr
(MTR-ECOLI); Fasta hit to
MTR-ECOLI (414 aa), 95% identity
in 414 aa overlap"
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permease"
/protein-id="CAD07799.1"
/db-xref="GI:16504347"
/db-xref="GOA:Q8Z3I2"
/db-xref="SPTREMBL:Q8Z3I2"
/translation="MATLTTTQTSPSLLGGVVII
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TKDLLGKGWNVVNGISIAFVLYIL
TYAYISASGSILHHTFAEMSLNVPARAAGFAFAL
LVAFFVWLSTKAVSRMTAIVLGAK
VITFFFLTFGSLLGHVQPTTLFNVAESHASYTPYL
LMTLPFCLASFGYHGNNVPSLMKYY
GKDPRTIVKCLIIYGTLLALALYSVWLLGTMGNIP
RPEFIGIAQKGGNIDVLVQALSGV
LNSRSLDLLLVVFSNFAVASSFLGVTGLGLFDYLA
DLFGFDDSAMGRFKTALLTFLPPM
IGGLLYPNGFLYAIGYAGLAATIWAIVPALLAR
KSRERFGSPKFRVWGKGPMIALIL
VFGVGNAVIHILSSFNLLPVYQ"
misc-feature      complement(95720..95770) /gene="STY3460"
)
)
/note="PS00594 Aromatic amino
acids permeases signature"
gene      complement(95996..97936) /gene="STY3461"
)
CDS      complement(95996..97936) /gene="STY3461"
)
/note="Similar to Escherichia coli
ATP-dependent RNA helicase
cold-shock dead-box protein A
SW:DEAD-ECOLI () (646 aa) fasta
scores: E(): 0, 97.7% id in 646
aa"
/codon-start=1
/transl-table=11
/product="ATP-dependent RNA
helicase (dead-box protein)"
/protein-id="CAD07800.1"
/db-xref="GI:16504348"
/db-xref="GOA:Q8Z3I1"
/db-xref="SPTREMBL:Q8Z3I1"
/translation="MMSYVDWPPLILRHTYYMAE
FETTFADLGLKAPILEALTDLGYE
KPSPIQAEICIPHLLGGRDVLGMAQTGSGKTAAFS
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LAVQVAEAMTDFSKHMRGVNVVALYGGQRYDVQL
RALRQGPQIVVGTPGRLLDHLKRG
TLDLSKLSGLVLDEADEMLRMGFIEDVETIMAQI
PEGHQ TALFSATMPEAIRRITRRF
MKEPQEVRIQSSVTTRPDISQSYWTVWGMKNEA
LVRFLEAEDFDAAII FVRTKNATL
EVAEALERNGYNSAALNGDMNQALREQTLERLKD
GRLDILIATDVAARGLDVERISLV
VNYDIPMDSSESYVHRIGRTGRAGRAGRALLFVEN
RERRLLRNIER TMKLTIPEVELPN
AELLGKRRLEKFAAKVQQQLESDLDQYRALLAK
IQPSAEGEELDLETLAAALLKMAQ
GERPLILPPDAPMRPKREFRDRDRGPRDRNRDRG
PRGDREERPRRERRDVGDMLYRI
EVGRDDGVEVRHIVGAIANEGDISSRYIGNIKLF
ASHSTIELPKGMPGEVLQHFTRTR
ILNKPMMNQLLGDVPHAGGERRGGRSFSGERR
EGGRNFGSERREGGRGDGRRFSGE
RRESRGPRRDDSTGRRRFGGDA"
misc-feature      complement(96866..97111) /gene="STY3461"
)
)

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misc-feature	complement(97217..97831)	/note="Pfam match to entry PF00271 helicase-C, Helicases conserved C-terminal domain, score 125.60, E-value 9.5e-34" /gene="STY3461"
misc-feature	complement(97400..97426)	/note="Pfam match to entry PF00270 DEAD, DEAD/DEAH box helicase, score 232.80, E-value 1.1e-72" /gene="STY3461"
misc-feature	complement(97715..97738)	/note="PS00039 DEAD-box subfamily ATP-dependent helicases signature" /gene="STY3461"
gene	complement(98064..98948)	/note="PS00017 ATP/GTP-binding site motif A (P-loop)" /gene="STY3462"
CDS	complement(98064..98948)	/gene="STY3462"
		/note="Orthologue of E. coli yhbm (YHBM-ECOLI); Fasta hit to YHBM-ECOLI (294 aa), 97% identity in 294 aa overlap. Contains 3x PFAM hits to TPR repeat domain." /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07801.1" /db-xref="GI:16504349" /db-xref="GOA:Q8XG77" /db-xref="SPTREMBL:Q8XG77" /translation="MKPFLRWCFVATALTLAGCS NSAWRKSEVLAVPLQPTLQQEVIL ARMEQILASRALTDDEAQLLYERGVLYDSLGLR ALARNDFSQALAIRPDMPEVFNYL GIYLTQAGNFDAAYEAFDSVLELDPTYNYAHLNR GIALYYGGRDKLAQDDLLAFYQDD PNDPYRSLWLVLVEQKLNEKQAKEALKARFEKSD KEQWGNIVFEFYLGDISEATLMER LKADATDNTSLAEHLSETNFYLGKYYLSLGDLDL ATALFKLAVANNVHNFVEHRYALL ELSLLGQDQDDLAESDQQ"
misc-feature	complement(98148..98249)	/gene="STY3462"
misc-feature	complement(98562..98663)	/note="Pfam match to entry PF00515 TPR, TPR Domain, score 11.30, E-value 2.9" /gene="STY3462"
misc-feature	complement(98664..98765)	/note="Pfam match to entry PF00515 TPR, TPR Domain, score 32.70, E-value 8.3e-06" /gene="STY3462"
gene	complement(99058..101193)	/note="Pfam match to entry PF00515 TPR, TPR Domain, score 26.00, E-value 0.00088" /gene="STY3463"
CDS	complement(99058..101193)	/note="synonym: pnp" /gene="STY3463"
		/note="Orthologue of E. coli pnp (PNP-ECOLI); Fasta hit to PNP-ECOLI (711 aa), 97% identity in 711 aa overlap" /codon-start=1 /transl-table=11 /product="polynucleotide phosphorylase" /protein-id="CAD07802.1" /db-xref="GI:16504350"

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/db-xref="SPTREMBL:Q8Z3I0"
/translation="MLNPVREFQYQGHTVTLET
GMMARQATAAVMVSMDDTAVFVTV
VGQKKAKPGQDFFPLTVNYQERTYAAGRIPGSFF
RREGRPSEGETLIARLIDRPVRPL
FPEGFVNEVQVIATVVSVPQVNPDIVAMIGASA
ALSLSGIPFNGPIGAARVGYINDQ
YVLNPTQDELKESKLDLVVAGTEAAVLMVESEAE
LLSEDTMLGAVVFGHEQQQVVIQA
INDLVKEAGKPRWDWQPEAVNDALNARVAALAES
RLSDAYRITDKQERYAQVDVIKSE
TIEQLIAEDETLDANELGEILHAIEKNVVRSRVL
AGEPRIDGREKDMIRGLDVRTGVL
PRTHGSALFTRGETQALVTATLTGTARDAQVLDEL
MGERTDSFLFHYNFPYPSVGETGM
VGSPKRREIGHGRLAKRGVLAVMPDMDKFPYTVR
VVSEITESNGSSSMASVCGASLAL
MDAGVPIKAAVAGIAMGLVKEGDNYVVLSDILGD
EDHLGDMDFKVAGSRDGISALQMD
IKIEGITKEIMQVALNQAKGARLHILGVMEQAIN
APRGDISEFAPRIHTIKISTDKIK
DVIGKGGSVIRALTEETGTTIEIEDDGTVKIAAT
DGEKAKYAIRRIEETAEIEVGRI
YNSKVTRIVDFGAFVAIGGGKEGLVHISQIADKR
VEKVTDYLMGQEVVPVKVLEVDRO
GRVRLSIKEATEQSOPAAPEAPASEQAE"
/misc-feature complement(99124..99342
)
/note="Pfam match to entry PF00575
S1, S1 RNA binding domain, score
92.80, E-value 5.2e-24"
/misc-feature complement(99385..99525
)
/note="Pfam match to entry PF00013
KH-domain, KH domain, score 47.50,
E-value 3e-10"
/misc-feature complement(99607..10025
1)
/note="Pfam match to entry PF01138
RNase-PH, 3' exoribonuclease
family, score 301.50, E-value
1e-86"
/misc-feature complement(100561..1011
84)
/note="Pfam match to entry PF01138
RNase-PH, 3' exoribonuclease
family, score 239.00, E-value
6.6e-68"
gene complement(101435..1017
04)
/note="synonym: rpsO"
CDS complement(101435..1017
04)
/note="Orthologue of E. coli rpsO
(RS15-ECOLI); Fasta hit to
RS15-ECOLI (88 aa), 98% identity
in 88 aa overlap"
/codon-start=1
/transl-table=11
/product="30S ribosomal subunit
protein S15"
/protein-id="CAD07803.1"
/db-xref="GI:16504351"
/db-xref="GOA:Q8XFF9"
/db-xref="SWISS-PROT:Q8XFF9"
/translation="MSLSTEATAKIVSEFGRDAN
DTGSTDVQVALLTAQINHLQGHFA
EHKKDHHSRRGLLRMVSRRLLDYLKRKDVARY
TALIERLGLRR"
/misc-feature complement(101441..1016
38)
/note="Pfam match to entry PF00312
Ribosomal-S15, Ribosomal protein
S15, score 133.80, E-value
1.7e-36"

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90)

gene complement(101855..102799) /note="PS00362 Ribosomal protein S15 signature" /gene="STY3465"

CDS complement(101855..102799) /note="synonym: truB" /gene="STY3465"

/note="Orthologue of E. coli truB (TRUB-ECOLI); Fasta hit to TRUB-ECOLI (314 aa), 94% identity in 314 aa overlap"
/codon-start=1
/transl-table=11
/product="tRNA pseudouridine 55 synthase (psi55 synthase) (p35 protein)"
/protein-id="CAD07804.1"
/db-xref="GI:16504352"
/db-xref="GOA:Q8Z3H9"
/db-xref="SPTREMBL:Q8Z3H9"
/translation="MSRPRRRGRDIHGVLRLDKP
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GALDPLATGMLPICLGEATKFSQYLLDSDKRYRV
IARLGQRTDTSADGQIVQERPVT
FSAEQLASALETFRGDIEQIPSMYSALKYQGRKL
YEYARQGIEVPREARPITVYELLF
IRHEGNELELEVHCSKGTIIRTIIDDLGEKLGCG
AHVTYLRRLTVSKYPVDRMVTLEH
LQTLVAQAEEQGVPAQLLDPLLMPMDSPASDYP
VVNLPLTSSVYFKNGNPVRTTGAP
LKGLVRVTEGEDDKFIGMGEIDDEGRVAPRRLV
EYPA"

misc-feature complement(102260..102712) /gene="STY3465"

/note="Pfam match to entry PF01509 TruB-N, TruB family pseudouridylate synthase (N terminal domain), score 326.70, E-value 2.7e-94"

gene complement(102799..103200) /gene="STY3466"

CDS complement(102799..103200) /note="synonym: rbfA" /gene="STY3466"

/note="Orthologue of E. coli rbfA (RBFA-ECOLI); Fasta hit to RBFA-ECOLI (132 aa), 96% identity in 132 aa overlap"
/codon-start=1
/transl-table=11
/product="ribosome-binding factor A (P15B protein)"
/protein-id="CAD07805.1"
/db-xref="GI:16504353"
/db-xref="GOA:Q8Z3H8"
/db-xref="SWISS-PROT:Q8Z3H8"
/translation="MAKEFGRPQORVAQEMQKEIA
LILQREIKDPRVGMMTTVSGVEMS
RDLAYAKVFVTFLLNDQDEAAVKNGIKALQEASGF
IRSLGKAMRLRIVPELTFFYDNS
LVEGMRMSNLVTNVVKHDEERRVNPDDSKED"

misc-feature complement(102862..103182) /gene="STY3466"

/note="Pfam match to entry PF02033 RBFA, Ribosome-binding factor A, score 222.50, E-value 6.4e-63"

misc-feature complement(102901..102966) /gene="STY3466"

/note="PS01319 Ribosome-binding factor A signature"

gene complement(103421..106099) /gene="STY3467"

CDS complement(103421..106099) /note="synonym: infB" /gene="STY3467"


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/note="Orthologue of E. coli infB
(IF2-ECOLI); Fasta hit to
IF2-ECOLI (890 aa), 96% identity
in 892 aa overlap"
/codon-start=1
/transl-table=11
/product="protein chain initiation
factor 2"
/protein-id="CAD07806.1"
/db-xref="GI:16504354"
/db-xref="GOA:Q8Z3H7"
/db-xref="SWISS-PROT:Q8Z3H7"
/translation="MTDLTLKALAAERQVSDRL
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SKSVQIEVRKKRTFVKRDPQEAER
LAAEEQAQREAEQARREAEQAKREAQQKAERE
AAEQAKREAAEKAKREAEEKDKVS
NQQTDDMTKTAQAEKARRENEAAELKRKAEFEAR
RKLEEEARRVAEEARRMAEENKWT
ATPEPVEDTSDYHVTTSQHARQAEDENDREVEGG
RGRGRNAKAARPAKKGKHAESKAD
REEARAAVRGGKGGKRGSSLQQGFQKPAQAVNR
DVVIGETITVGE LANKMAVKGSQV
IKAMMKLGAMATINQVIDQETAQLVAEEMGHKVI
LRRENELEEAVMSDRDTGAAAEPR
APVVTIMGHVDHGKTSLLDYIRSTKVASGEAGGI
TQHIGAYHVETDNGMITFLDTPGH
AAFTSMRARGAQATDIVVLVVAADDGVMPQTIEA
IQHAKAAGVPVAVNKKIDKPEAD
PDRVKNELSQYGILPEEWGGESQFVHVSAGAGTG
IDELLDAILLQAEVLELKAVRKGM
ASGAVIESFLDKGRGPVATVLVREGTLHKGDIVL
CGFEYGRVRAMRNELGQEVLEAGP
SIPVEILGLSGVPAAGDEVTVVRDEKKAREVALY
RQGKFREVKLARQQKSKLENMFVN
MTEGEVHEVNIVLKADVQGSVEAISDSLKLSTL
EVKVKIIGSGVGGITETDATLAAA
SNAILVGFNVRADASARKVIESESLLDRYYSVIY
NLIDEVKAAMSGMLSPELKQOIIG
LAEVRDVFKSPKFGAIAAGCMVTEGTIKRHNPIRV
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TIA"

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misc-feature	complement(103451..103852)	/gene="STY3467"
misc-feature	complement(103508..103576)	/note="Pfam match to entry PF02131 IF2, Initiation factor 2, score 311.60, E-value 9e-90" /gene="STY3467"
misc-feature	complement(103898..104929)	/note="PS01176 Initiation factor 2 signature" /gene="STY3467"
misc-feature	complement(104879..104902)	/note="Pfam match to entry PF00009 GTP-EFTU, Elongation factor Tu family, score 262.10, E-value 5.5e-77" /gene="STY3467"
gene	complement(106124..107626)	/note="PS00017 ATP/GTP-binding site motif A (P-loop)" /gene="STY3468"
CDS	complement(106124..107626)	/note="synonym: nusA" /gene="STY3468" /note="Orthologue of E. coli nusA (NUSA-ECOLI); Fasta hit to NUSA-ECOLI (495 aa), 94% identity in 500 aa overlap" /codon-start=1 /transl-table=11 /product="L factor"

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 /db-xref="SPTREMBL:Q8Z3H6"
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 IVTGTVKKVNRDNISLEIKSEGMA
 GNAEAVILREDMLPRENFRPGDRIRGVLYAVRPE
 ARGQFLFVTRSKPEMLIELFRIEV
 PEIGEEVIEIKAAARDPGSRAKIAVKTNDRIDP
 VGACVGMRGARVQAVSTELGGERI
 DIVLWDDNPAQFVINAMAPADVASIVVDEDKHTM
 DIAVEAGNLAQAIGRNGQNVHLAS
 QLSGWELNVMTVDDLQAKHQAEAHAAIEIFTKYL
 DIDEEFATVLVEEGFSTLEELAYV
 PMKELLEIDGLDEPTVEALRERAKNALATLAQDQ
 EASLGDNKPADDLLNLEGLDRDMA
 FKLAARGVCTLEDLADQGIDDLADIEGLTDEKAG
 ELIMAARNICWFGDEA"
 /gene="STY3468"
 /note="Pfam match to entry PF00575
 S1, S1 RNA binding domain, score
 32.60, E-value 2.2e-07"
 /gene="STY3469"
 /note="Orthologue of E. coli yhbC
 (YHBC-ECOLI); Fasta hit to
 YHBC-ECOLI (140 aa), 95% identity
 in 140 aa overlap"
 /codon-start=1
 /transl-table=11
 /product="conserved hypothetical
 protein"
 /protein-id="CAD07808.1"
 /db-xref="GI:16504356"
 /db-xref="SPTREMBL:Q8XFC7"
 /translation="MITAPVEALGYELVGIEFIR
 GRTSTLRIYIDSEDGINVDDCADV
 SHQVSAVLDDVEDPISVAYNLEVSSPGLDRPMFTA
 DHYARFQGEVALVLRMAVQNRRK
 WQGIKAVDGEITVTVEGKDEVFALSNIQKANL
 VPHF"
 /product="tRNA-Met"
 /note="tRNA Met anticodon CAT,
 Cove score 86.07"
 /gene="STY3470"
 /note="synonym: argG"
 /gene="STY3470"
 /note="Orthologue of E. coli argG
 (ASSY-ECOLI); Fasta hit to
 ASSY-ECOLI (446 aa), 96% identity
 in 446 aa overlap"
 /codon-start=1
 /transl-table=11
 /product="argininosuccinate
 synthetase"
 /protein-id="CAD07809.1"
 /db-xref="GI:16504357"
 /db-xref="GOA:Q8Z3H5"
 /db-xref="SWISS-PROT:Q8Z3H5"
 /translation="MHKNALKQKPISLSVNQAGF
 YSMTTILKHLPAQQRIGIAFSGGL
 DTSALLWMRQKGAVPYAYTANLGQPEDDDYDAI
 PRRAMEYGAENARLIDCRKQLVAE
 GIAAIQCGAFHNTTGGLTYFNTTPLGRAVTGTML
 VAAMKEDGVNIWGDGSTYKGNIE
 RFYRYGLLTNAELQIYKPWLDTDFIDELGGRHEM
 SEFMIACGFDYKMSVEKAYSTDSN
 MLGATHEAKDLEFLNSSVKIVNPIMGVKFWDESV

misc-feature	complement(107018..107236)	
gene	complement(107654..108076)	
CDS	complement(107654..108076)	
tRNA	complement(108314..108390)	
gene	108668..110077	
CDS	108668..110077	

		GTSMAAESRRNGLSSSTLANALTR PWPKGELIIAKALGTEPWVIWPSRYHDPRTHEFI DRTRLMRARNKDKQNV"
gene	complement(123421..1246 80)	/gene="STY3486"
CDS	complement(123421..1246 80)	/note="synonym: murA" /gene="STY3486" /note="Orthologue of E. coli murA (MURA-ECOLI); Fasta hit to MURA-ECOLI (419 aa), 97% identity in 419 aa overlap" /codon-start=1 /transl-table=11 /product="UDP-N-acetylglucosamine 1-carboxyvinyltransferase" /protein-id="CAD07824.1" /db-xref="GI:16504372" /db-xref="GOA:Q8XF63" /db-xref="SWISS-PROT:Q8XF63" /translation="MDKFRVQGPPTTLQGEVTISG AKNAALPILFAALLAEFPVEIQNV PKLKDVDTSMKLLSQLGAKVERNGSVHIDASQVN VFCAPYDLVKTMRASIWALGPLVA RFGQGQVSLPGGCTIGARPVDLHITGLEQLGATI KLEEGYVKASVEGRLKGAHIVMDK VSVGATVTIMCAATLAEGTTIIENAAREPEIVDT ANFLVTLGAKIAGQGTDRITIEGV ERLGGGVYRVLPDRIETGTFLVAAAIISRGKILCR NAQPDTLDAVLAKLRDAGADIEVG EDWISLDMHGKRPKAVNVRTAPHPAFPTDMQAF TLLNLVAEGTGFITETVFENRFMH VPELSRMGARAEIESNTVICHGVETLSGAQVMAT DLRASASLVLAGCIAEGTTIVDRI YHIDRGYERIEDKLRALGANIERVKGE"
misc-feature	complement(123463..1246 65)	/gene="STY3486" /note="Pfam match to entry PF00275 EPSP-syntase, EPSP synthase (3-phosphoshikimate 1-carboxyvinyltransferase), score 617.60, E-value 7.1e-182"
gene	complement(124734..1250 27)	/gene="STY3487"
CDS	complement(124734..1250 27)	/gene="STY3487" /note="Similar to Escherichia coli protein YrbA SW:YRBA-ECOLI (P43781; P76672) (84 aa) fasta scores: E(): 0, 97.6% id in 84 aa. Weakly similar to several Bola-like proteins involved in the general stress response e.g. and to Pseudomonas fluorescens Bola protein TR:Q9XAV4 (EMBL:AJ243174) (99 aa) fasta scores: E(): 1.3e-07, 37.5% id in 72 aa. Note codon 14 offers an alternative translational start site." /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07825.1" /db-xref="GI:16504373" /db-xref="GOA:Q8XFL8" /db-xref="SPTREMBL:Q8XFL8" /translation="MLGCFHYLTNKEPMENHEIQ SVLMNALSLQEVHVSGDGSHFQVI AVGEMFDGMSRVKKQQTVYGPLMEYIADNRIHAV SIKAYTPAEWARDRKLNGF"
misc-feature	complement(124764..1249 88)	/gene="STY3487" /note="Pfam match to entry PF01722 Bola, Bola-like protein, score

gene complement(125176..1254 /gene="STY3488"
72)

CDS complement(125176..1254 /gene="STY3488"
72)

/note="Similar to the C-terminus
of Escherichia coli hypothetical
14.4 kDa protein in YrbB
SW:YRBB-ECOLI (P45389) (129 aa)
fasta scores: E(): 1.3e-25, 69.1%
id in 97 aa. Also similar to
several anti-sigma factor
antagonists e.g. Listeria
monocytogenes anti-sigma B factor
antagonist RsbV SW:RSBV-LISMO
(O85016) (114 aa) fasta scores:
E(): 0.38, 25.6% id in 90 aa"
/codon-start=1
/transl-table=11
/product="possible anti-sigma
factor antagonist"
/protein-id="CAD07826.1"
/db-xref="GI:16504374"
/db-xref="SPTREMBL:Q8XGD1"
/translation="MTPQLTWTREADTLVLGEL
DQDVLAPLWDARVEAMNGVTRIDL
SQISRVDTGGLALLAHLVNQAKKQGNVSLSGVN
DKVYALAQLYNLPEDVLPRLM"

misc-feature complement(125179..1254 /gene="STY3488"
63)

/note="Pfam match to entry PF01740
STAS, STAS domain, score 29.50,
E-value 7.6e-05"

gene complement(125472..1261 /gene="STY3489"
07)

CDS complement(125472..1261 /gene="STY3489"
07)

/note="Orthologue of E. coli yrbC
(YRBC-ECOLI); Fasta hit to
YRBC-ECOLI (211 aa), 94% identity
in 211 aa overlap. Contains a
possible N-terminal signal
sequence"
/codon-start=1
/transl-table=11
/product="possible exported
protein"
/protein-id="CAD07827.1"
/db-xref="GI:16504375"
/db-xref="SPTREMBL:Q8XF31"
/translation="MFKRLMMVALLVIAPLSAAT
AADQSNPYKLMNEAAQKTFDRLKN
EQPKIRANPDYLRDVVDQELLPYVQVKYAGALVL
GRYYKEATPAQREAYFAAFREYLK
QAYGQALAMYHGQTYQIAPEQPLGDATIVPIRV
IIDPNGRPPVRLDFQWRKNTQTGN
WQAYDMIAEGVSMITTKQNEUSDLLRTKGIDGLT
AQLKSISQOKITLDEKQ"

gene complement(126126..1266 /gene="STY3490"
77)

CDS complement(126126..1266 /gene="STY3490"
77)

/note="Orthologue of E. coli
YRBD-ECOLI; Fasta hit to
YRBD-ECOLI (183 aa), 87% identity
in 183 aa overlap. Contains a
possible N-terminal signal
sequence"
/codon-start=1
/transl-table=11
/product="possible exported
protein"
/protein-id="CAD07828.1"
/db-xref="GI:16504376"
/db-xref="SPTREMBL:Q8XG30"
/translation="MQTKKNEIWVGVFLLVALLA

TFDNIIGGLKVRSPVRIGGVVGRVEDISLDPKTY
LPRVTLDIEERYNHIPDTSSLSIR
TSGLLGEQYLALNVGFEDPELGTSILKDGSTIQD
TKSAMVLEDMIGQFLYNSKGDDNK
NSGDAPAATEGHTEATTPAGETK"
/gene="STY3491"

gene complement (126682..1274 64)
CDS complement (126682..1274 64)
/ gene="STY3491"
/note="Orthologue of E. coli yrbE (YRBE-ECOLI); Fasta hit to YRBE-ECOLI (260 aa), 96% identity in 260 aa overlap. Contains possible membrane spanning hydrophobic domains."
/codon-start=1
/transl-table=11
/product="putative membrane protein"
/protein-id="CAD07829.1"
/db-xref="GI:16504377"
/db-xref="SPTREMBL:Q8XFR5"
/translation="MLLNALAALGHSGIKTVRTF GRAGLMLFNAIIGKPEFRKHAPLL VRQLYNVGVLSMLIIIVSGVFIGMVLGLQGYLVL TTYSAETSLGMLVALSLLRELGPV VAALLFAGRAGSALTAEIGLMRATEQLSSMEMMA VDPLRRVISPRFWAGVISLPLLLTI IFVAVGIWGGSLVGVSWKIDAGFFWSAMQNAVD WRMDLVNCLIKSVVFAITVTWIAL FNGYDAIPTSAGISRATTRTVVHASLAVLGLDFV LTALMFGN"

gene complement (127472..1282 84)
CDS complement (127472..1282 84)
/ gene="STY3492"
/note="Fasta hit to ARTP-ECOLI (242 aa), 30% identity in 234 aa overlap Fasta hit to YHBG-ECOLI (240 aa), 33% identity in 228 aa overlap Fasta hit to GLTL-ECOLI (241 aa), 30% identity in 242 aa overlap Fasta hit to TAUB-ECOLI (255 aa), 31% identity in 228 aa overlap Fasta hit to YECC-ECOLI (250 aa), 34% identity in 229 aa overlap Fasta hit to GLNQ-ECOLI (240 aa), 32% identity in 245 aa overlap Fasta hit to PSTB-ECOLI (257 aa), 31% identity in 256 aa overlap Orthologue of E. coli YRBF-ECOLI; Fasta hit to YRBF-ECOLI (269 aa), 95% identity in 266 aa overlap"
/codon-start=1
/transl-table=11
/product="possible ABC-transport protein, ATP-binding component"
/protein-id="CAD07830.1"
/db-xref="GI:16504378"
/db-xref="GOA:Q8Z3G8"
/db-xref="SPTREMBL:Q8Z3G8"
/translation="MGQSAANLVDMRDVSFCRGE RCIFDNISLTVPRGKITAIMGPSG IGKTTLRLRIGGQIPDPKGEILFDGENVPAMSRs RLYTVRKRMSMLFQSGALFTDMNV FDNVAYPLREHTNLPAPLLKSVMMKLEAVGLRG AAKLMPSELSSGGMARRAALARAIA LEPDLIMFDEPFVQGDPITMGVLVKLISELNSAL GVTCTVVVSHDVPEVLSIADHAWIM ADKKIVAHGSAQALQENTDPRVRQFLDGIADGPV PFRYPAGDYHLDLLETGS"

misc-feature complement (127622..1281 85)
/ gene="STY3492"
/note="Pfam match to entry PF00005"

misc-feature	complement(127808..127852)	195.10, E-value 1.1e-54 /gene="STY3492" /note="PS00211 ABC transporters family signature"
misc-feature	complement(128141..128164)	/gene="STY3492" /note="PS00017 ATP/GTP-binding site motif A (P-loop)"
gene CDS	128497..129474 128497..129474	/gene="STY3493" /gene="STY3493" /note="Similar to Escherichia coli hypothetical protein YrbG SW:YRBG-ECOLI (P45394) (325 aa) fasta scores: E(): 0, 87.3% id in 324 aa. Also similar in parts to Eukaryotic sodium/calcium exchange proteins e.g. Drosophila melanogaster potassium-dependent sodium/calcium exchanger TR:Q9U6A0 (EMBL:AF190455) (856 aa) fasta scores: E(): 9.2e-07, 30.1% id in 153 aa. Contains multiple possible membrane spanning hydrophobic domains Orthologue of E. coli yrbG (YRBG-ECOLI); Fasta hit to YRBG-ECOLI (325 aa), 87% identity in 324 aa overlap" /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07831.1" /db-xref="GI:16504379" /db-xref="GOA:Q8Z3G7" /db-xref="SPTREMBL:Q8Z3G7" /translation="MLLAMALLIIGLLLVAYGAD RLVFAASILCRTFGIPPLIIGMTV VSIQTSLEIIVSVAASLHGQLDLAVGAALGSNI TNILLILGLAALVRPFTVHSDVLR RELPLMLFVSVVAGSVLHDGQLSRSDGIFLLLLL VLWLLFIVKILARLAERQGNDSLTR EQLAELPREDGLPVAFLWLGLALVIMPMATRMVI DNATVLANYFAMSELTGLTVIAV GTSLELATAIAGVRKGENDIAVGNLIGANIFNL AIVLGLPALIAPGEINPLAFGRDY SVMLLVSVVFALLCWRHPRQIGRGAGILLTGGFI VWLAMLYWLSPLLVG"
misc-feature	128533..128949	/gene="STY3493" /note="Pfam match to entry PF01699 Na-Ca-Ex, Sodium/calcium exchanger protein, score 171.70, E-value 1.2e-47"
misc-feature	129046..129468	/gene="STY3493" /note="Pfam match to entry PF01699 Na-Ca-Ex, Sodium/calcium exchanger protein, score 163.10, E-value 4.9e-45"
gene CDS	129488..130474 129488..130474	/gene="STY3494" /gene="STY3494" /note="Fasta hit to GUTQ-ECOLI (308 aa), 46% identity in 308 aa overlap Orthologue of E. coli yrbH (YRBH-ECOLI); Fasta hit to YRBH-ECOLI (328 aa), 92% identity in 328 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07832.1" /db-xref="GI:16504380" /db-xref="GOA:Q8Z3G6" /db-xref="SPTREMBL:Q8Z3G6" /translation="MSHLALQPGFDFQAGKEVL"

misc-feature 129614..130018

misc-feature 130115..130276

misc-feature 130310..130468

gene 130495..131061
CDS 130495..131061

gene 131058..131633
CDS 131058..131633

gene 131638..132156
CDS 131638..132156

MFNCTGKVVMGMGKSGHIGRKMAATFASTGTSS
FFVHPGEAAHGDLMVTPQDVVIA
ISNSGESSEIAALIPVLKRLHVPLICITGRPESS
MARAADVHLKCVKVPKEACPLGLAP
TSSTTATLVMGDALAVALLKARGFTAEDFALSHP
GGALGRKLLLRVSDIMHTGDEIPH
VKNHATLRDALLEITRKNLGMTVICDESMKIDGI
FTDGDLLRRMFDMGDMRQLGIAEV
MTPGGIRVRPGILAVDALNLMQSRHITSVLVADG
DQLLGVLMHMDLLRAGVV"
/gene="STY3494"
/note="Pfam match to entry PF01380
SIS, SIS domain, score 155.90,
E-value 7.1e-43"
/gene="STY3494"
/note="Pfam match to entry PF00571
CBS, CBS domain, score 38.80,
E-value 1.2e-07"
/gene="STY3494"
/note="Pfam match to entry PF00571
CBS, CBS domain, score 38.20,
E-value 1.9e-07"
/gene="STY3495"
/gene="STY3495"
/note="Orthologue of E. coli yrbI
(YRBI-ECOLI); Fasta hit to
YRBI-ECOLI (188 aa), 96% identity
in 188 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical
protein"
/protein-id="CAD07833.1"
/db-xref="GI:16504381"
/db-xref="GOA:Q8Z3G5"
/db-xref="SPTREMBL:Q8Z3G5"
/translation="MSKAGASLATCYGPVSTHVM
TKAENIRLLILDVDGVLSDGLIYM
GNNGEELKAFNVRDGYGIRCALTSNIEVAIITGR
KAKLVEDRCATLGIVHLYQGQSNK
LIAFSDLLEKLAIAPENVAYVGDDLIDWPVMEKV
GLSVAVADAHPLLI PRADYVTHIA
GGRGAVREVCDLLLLLAQGKLDEAKGQSI"
/gene="STY3496"
/gene="STY3496"
/note="Orthologue of E. coli yrbK
(YRBK-ECOLI); Fasta hit to
YRBK-ECOLI (191 aa), 91% identity
in 191 aa overlap. Contains a
possible N-terminal signal
sequence"
/codon-start=1
/transl-table=11
/product="possible exported
protein"
/protein-id="CAD07834.1"
/db-xref="GI:16504382"
/db-xref="SPTREMBL:Q8XGY6"
/translation="MSKTRRWVIIILLSLAILVLI
GINLADKDDPAAVMVNSNDPTYKS
EHTDTVVYSPEGALSYRLIAQHVEYFSDQAVSWF
TQPVLTTFDKDKVPTWSIKADKAK
LTNDRMLYLYGHVEVNALVPDAQLRRIITDNAQI
NLVTQDVTNSNDLVTLYGTTFNSSG
LKMRGNLRSKNAELIEKVRTSYEIQNKQTQP"
/gene="STY3497"
/gene="STY3497"
/note="Orthologue of E. coli yhbN
(YHBN-ECOLI); Fasta hit to
YHBN-ECOLI (185 aa), 92% identity
in 185 aa overlap. Due to the
overlap, lacks the very N-terminal
12 aa of the E. coli orthologue."
/codon-start=1
/transl-table=11

gene	132163..132888	protein"
CDS	132163..132888	/protein-id="CAD07835.1"
		/db-xref="GI:16504383"
		/db-xref="SPTREMBL:Q8Z3G4"
		/translation="MLAGSLAASIPAFAVTGDT
		EQPIHIDSDQQSLDMQGNVVTFTG
		NVVMTOGTIKINADKVVVTRPGGEQGKEVIDGYG
		NPATFYQMODNGKPVKGHASHMHY
		ELAKDFVVLGTGNAYLEQLDSNITGDKITYLVKEQ
		KMQAFSEKGRVTTVLVPSQLQDK
		NKGQTPAQKKS"
		/gene="STY3498"
		/gene="STY3498"
		/note="Fasta hit to ARTP-ECOLI
		(242 aa), 30% identity in 212 aa
		overlap Fasta hit to YCFV-ECOLI
		(233 aa), 30% identity in 203 aa
		overlap Fasta hit to ZNUC-ECOLI
		(251 aa), 33% identity in 233 aa
		overlap Fasta hit to LIVF-ECOLI
		(237 aa), 35% identity in 229 aa
		overlap Fasta hit to FECE-ECOLI
		(255 aa), 31% identity in 237 aa
		overlap Fasta hit to TAUB-ECOLI
		(255 aa), 32% identity in 238 aa
		overlap Fasta hit to LIVG-ECOLI
		(255 aa), 32% identity in 249 aa
		overlap Fasta hit to FTSE-ECOLI
		(222 aa), 30% identity in 216 aa
		overlap Fasta hit to BTUD-ECOLI
		(249 aa), 31% identity in 231 aa
		overlap Fasta hit to PHNC-ECOLI
		(262 aa), 31% identity in 249 aa
		overlap Fasta hit to YECC-ECOLI
		(250 aa), 31% identity in 239 aa
		overlap Fasta hit to P76909 (246
		aa), 33% identity in 204 aa
		overlap Fasta hit to YRBF-ECOLI
		(269 aa), 34% identity in 228 aa
		overlap Fasta hit to YABJ-ECOLI
		(232 aa), 30% identity in 215 aa
		overlap Fasta hit to YHDZ-ECOLI
		(252 aa), 31% identity in 237 aa
		overlap Orthologue of E. coli yhbG
		(YHBG-ECOLI); Fasta hit to
		YHBG-ECOLI (240 aa), 97% identity
		in 240 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="probable ABC transport
		protein, ATP-binding component"
		/protein-id="CAD07836.1"
		/db-xref="GI:16504384"
		/db-xref="GOA:Q8XFR6"
		/db-xref="SPTREMBL:Q8XFR6"
		/translation="MATLTAKNLAKAYKGRRVVE
		DVSLTVNSGEIVGLLGPNAGAKTT
		TFYMVVGIVPRDAGNIIIDEDISLLPLHARARR
		GIGYLPQEASIFRRLSVFDNLMAV
		LQIRDDLTAEQREDRANELMEEFHIEHLRDSMGQ
		ALSGGERRRVEIARALANPKFIL
		LDEPFAGVDPISVIDIKRIIEHLRDSGLGVLITD
		HNVRETLAVCERAYIVSQGHIAH
		GTPTEILQDEHVKRVYLGEDFRL"
misc-feature	132247..132801	/gene="STY3498"
		/note="Pfam match to entry PF00005
		ABC-tran, ABC transporter, score
		219.90, E-value 3.7e-62"
misc-feature	132268..132291	/gene="STY3498"
		/note="PS00017 ATP/GTP-binding
		site motif A (P-loop)"
misc-feature	132574..132618	/gene="STY3498"
		/note="PS00211 ABC transporters
		family signature"
gene	132936..134369	/gene="STY3499"

CDS	132936..134369	/gene="STY3499" /note="Orthologue of E. coli rpoN (RP54-ECOLI); Fasta hit to RP54-ECOLI (477 aa), 94% identity in 477 aa overlap" /codon-start=1 /transl-table=11 /product="RNA polymerase sigma-54 factor (sigma-N)" /protein-id="CAD07837.1" /db-xref="GI:16504385" /db-xref="GOA:Q8Z3G3" /db-xref="SPTREMBL:Q8Z3G3" /translation="MKQGLQLRLSQQLAMTPQLQQAIRLLQLSTLELQQELQQALENNPLLEQTDLDHDEIDTQQPQDDDDPLDTADALEQKEMPEELPLDASWDEIYTAGTPSGPSGDYIDDELVPYQGETTQSLQDYLMWQVELTPFSDTDRAIATSIVDAVDDTGYLTVSLDEIRESMDVEVDLDEVEAVLKRIQRFDPVGVAAKDLRDCLLIQLSQFDKSTPWLEEARLIICDHLDLLANHDFRTLMRVTRLKEEVLKEAVNLIQSLDPRPGQSIQTGEPEYVIPDVLVRKHNGRWTVELNSDSIPRLQINQHYAAMCNSARNDADSQFIRSNLQDAKWLIKSLERSNDTLLRVSRCIVEQQQAFFEQGE EYMKPMVLA DIAQAVEMHESTISRVTQKYLHS PRGIFELKYFFSSHVNTEGGGEASSTAIRALVKKLIAAENPAKPLSDSKLTSLLSEQGIMVARRTVAKYRESLSIPPSNQRKQLV"
misc-feature	132936..134360	/gene="STY3499" /note="Pfam match to entry PF00309 Sigma54-factors, Sigma-54 factors family, score 938.70, E-value 1.5e-278"
misc-feature	134025..134084	/gene="STY3499" /note="PS00717 Sigma-54 factors family signature 1"
misc-feature	134298..134321	/gene="STY3499" /note="PS00718 Sigma-54 factors family signature 2"
gene	134392..134679	/gene="STY3500"
CDS	134392..134679	/gene="STY3500" /note="Orthologue of E. coli yhbH (RP5M-ECOLI); Fasta hit to RP5M-ECOLI (95 aa), 95% identity in 95 aa overlap" /codon-start=1 /transl-table=11 /product="probable sigma(54) modulation protein" /protein-id="CAD07838.1" /db-xref="GI:16504386" /db-xref="SPTREMBL:Q8Z3G2" /translation="MQLNITGHNVEITEALREFVTTKFAKLEQYFERINQVYVVLKVEKVTHISDATLHVNGGEIHASAEGQDMYAAIDGLIDKLARQLTKHKDKLKQY"
gene	134797..135288	/gene="ptsN"
CDS	134797..135288	/note="synonym: STY3501" /gene="ptsN" /EC-number="2.7.1.69" /note="Similar to Escherichia coli nitrogen regulatory IIA protein PtsN or RpoP SW:PTSN-ECOLI (P31222) (163 aa) fasta scores: E(): 0, 95.1% id in 163 aa" /codon-start=1 /transl-table=11 /product="nitrogen regulatory IIA protein" /protein-id="CAD07839.1" /db-xref="GI:16504387" /db-xref="GOA:Q8XEZ0" /db-xref="SPTREMBL:Q8XEZ0"

misc-feature 134887..135075

SGVHCQSKKRALEIISELAQKLS
LPPQVVFETILTREKMGSTGIGNGIAIPHGKLEE
DTLRAVGVFVQLETPIAFDAIDNQ
PVDLLFALLVPADQTKTHLHTLSLVAKRLADKTI
CRRLLRAALNDEELYQIITDTEGEQ NEA"
/gene="ptsN"
/note="Pfam match to entry PF00359
PTS-EIIA-2,
phosphoenolpyruvate-dependent
sugar phosphotransferase system,
EIIA 2, score 97.50, E-value
5e-26"

misc-feature 134968..135018

/gene="ptsN"
/note="PS00372 PTS EIIA domains
phosphorylation site signature 2"

gene 135334..136188
CDS 135334..136188

/gene="STY3502"
/gene="STY3502"
/note="Orthologue of E. coli
YHBJ-ECOLI; Fasta hit to
YHBJ-ECOLI (284 aa), 99% identity
in 283 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical
protein"
/protein-id="CAD07840.1"
/db-xref="GI:16504388"
/db-xref="GOA:Q8Z3G1"
/db-xref="SWISS-PROT:Q8Z3G1"
/translation="MVLMIIVSGRSGSGKSVALRA
LEDMGFYCVDNLPVVLLPDLARTL
ADRQISAAVSIDVRNIPESPEIFEQAMNNLPGAF
SPQLLFLDADRNTLIRRYSDTRRL
HPLSSKNLSLESIDKESDLLEPLRSRADLIVDT
SEMSVHELAEMLRTRLLGKREREL
TMVFESFGFKHGIPIDADYVFDVRFLPNPHWDPK
LRPMTGLDKPVA AFLDRHTEVHNF
IYQTRSYLELWLPMLETNNRSYLTVAIGCTGGKH
RSVYIAEQLADYFRSRGKNVQSRH RTLEKRKT"

misc-feature 135355..135378

/gene="STY3502"
/note="PS00017 ATP/GTP-binding
site motif A (P-loop)"

gene 136185..136457

/gene="STY3503"
/note="synonym: ptsO"

CDS 136185..136457

/gene="STY3503"
/note="Fasta hit to PTHP-ECOLI (85
aa), 30% identity in 79 aa overlap
Orthologue of E. coli ptsO
(PTSO-ECOLI); Fasta hit to
PTSO-ECOLI (90 aa), 97% identity
in 90 aa overlap"
/codon-start=1
/transl-table=11
/product="phosphocarrier protein
(nitrogen related hpr)"
/protein-id="CAD07841.1"
/db-xref="GI:16504389"
/db-xref="GOA:Q8XGX0"
/db-xref="SPTREMBL:Q8XGX0"
/translation="MTVKQTVETNKLGMHARPA
MKLFELMQGFDAEVLLRNDEGTEA
EANSVIALMLDSAKGRQIEIEATGPQVEEALAA
VIALFNSGFDED"

misc-feature 136188..136421

/gene="STY3503"
/note="Pfam match to entry PF00381
PTS-HPr, PTS HPr component
phosphorylation sites, score
138.00, E-value 1.7e-37"

misc-feature 136224..136247

/gene="STY3503"
/note="PS00369 PTS HPR component
histidine phosphorylation site
signature"

misc-feature 136305..136352

/gene="STY3503"
/note="PS00589 PTS HPR component
serine phosphorylation site

misc-feature	136564..136714	/note="region of low G+C (27%) and multiple short homopolymeric base sequences"
gene	136702..137334	/gene="STY3504"
CDS	136702..137334	/gene="STY3504" /note="Orthologue of E. coli YRBL-ECOLI; Fasta hit to YRBL-ECOLI (210 aa), 77% identity in 210 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07842.1" /db-xref="GI:16504390" /db-xref="SPTREMBL:Q8XFU2" /translation="MILLSKQTPLGAGRHRKCYT HPDNARRCIKVIYNRDHGGDKAIR RELSYYAHLRSRYLTDWSAIPRYYGTVETDCGTGY VYDMITDFNGAPSITLTFEFAAQCR YEEDVAVLRRLKLLKRYLLDNHIVTMSLKPQNI LCQRRISESEVVPVVCNLDGEGSTFI PLATWSTWCCERKLERVWQRFIAQPALAVALERD AQPDKKRLALTSHEA"
gene	complement(137409..138137)	/gene="mtgA"
CDS	complement(137409..138137)	/note="synonym: STY3505" /gene="mtgA" /EC-number="2.4.2.-" /note="Similar to Escherichia coli monofunctional biosynthetic peptidoglycan transglycosylase mtgA SW:MTGA-ECOLI (P46022) (242 aa) fasta scores: E(): 0, 83.9% id in 242 aa" /codon-start=1 /transl-table=11 /product="monofunctional biosynthetic peptidoglycan transglycosylase" /protein-id="CAD07843.1" /db-xref="GI:16504391" /db-xref="GOA:Q8Z3G0" /db-xref="SPTREMBL:Q8Z3G0" /translation="MSKRRIAPLTLRRLRLRIL AALAVFWGGGIALFSVVPVPSAV MAERQISAWLGGEFGYVAHSDWVSMADISPMWGL AVIAAEDQKFPEHWGFDVPAIEKA LAHNERNESRIRGASTLSQQTAKNLFWDGRSWV RKGLEAGLTLGIETVWSKKRILTV YLNIAEFGDGIFGVEAAAQRYFHKPASRLSVSEA ALLAAVLPNPLRYKANAPSGYVRS RQAWIMRQMRQLGGESFMTRNQLN"
misc-feature	complement(137499..138005)	/gene="mtgA"
gene	complement(138134..138787)	/note="Pfam match to entry PF00912 Transglycosyl, Transglycosylase, score 300.60, E-value 1.9e-86" /gene="STY3506"
CDS	complement(138134..138787)	/gene="STY3506" /note="Similar to Escherichia coli sigma cross-reacting protein 27A to which antibodies against region 2.2 peptide of RNA polymerase sigma subunit bind, YhbL SW:S27A-ECOLI (P26428; P76673) (217 aa) fasta scores: E(): 0, 88.9% id in 217 aa. Also significantly similar to the C-terminus of Homo sapiens ES1 proteins: SW:ES1-HUMAN () (268 aa) fasta scores: E(): 4.8e-32, 45.3%

		/codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07844.1" /db-xref="GI:16504392" /db-xref="SPTREMBL:Q8Z3F9" /translation="MKKIGVVLSGCGVYDGTIEH EAVLTLTLLAIARSGAQAICFAPDKP QADVINTHLTGEAMAETRNVLIEAARITRGDIRPL SQAQPEELDALIVPGGFGAANKLS NFASKGSECRVDSVVALAKAMHQSGKPLGFICI APAMPLPKIFDFPLRLTIGTDIDTA EVLEEMGAEHVPCPVDDIVVDEDNKVVTTPAYML AQDIAQAASGIDKLVSRLVLAE"
gene	complement(139014..1413 50)	/gene="STY3507"
CDS	complement(139014..1413 50)	/note="synonym: arcB" /gene="STY3507" /note="Orthologue of E. coli arcB (ARCB-ECOLI); Fasta hit to ARCB-ECOLI (776 aa), 94% identity in 778 aa overlap" /codon-start=1 /transl-table=11 /product="aerobic respiration control sensor protein" /protein-id="CAD07845.1" /db-xref="GI:16504393" /db-xref="GOA:Q8Z3F8" /db-xref="SPTREMBL:Q8Z3F8" /translation="MKQIRMLAQYYVDLMMKLGL VRFSMLLALALVVLAIVVQMAVTM VLHGQVESIDVIRSIFFGLLITPWAVYFLSVVVE QLEESRQRLSRLVQKLEEMRERDL KLNVLKDNIAQLNQEIADREKAEAELOETFEQL KVEIKEREEAQIQLEQQSSFLRSF LDASPDLVFYRNEDKEFGSCNRAMELLTGKSEKQ LVHLKPEDVYSPEAAEKVIETDEK VFRHNVSLTYEQWLDYPDGRKACFEIRKVPYYDR VGKRHGLMGFGRDITERKRYQDAL ERASRDKTTFISTISHELRTPLNGIVGLSRILLD TDLTAEQEKYLKTIHVSATVTLGNI FNDIIDMDKMERRKVQLDNQPVDFTSFMADLENL SGLQAQQKGLRFVLEPTLPLPHKV ITDGTRLRQILWNLISNAVKFTQQGQVTVRARYD EGDMLHFEVEDSGIGIPQDEQDKI FAMYYQVKDSHGGKPATGTGIGLAVSRRLAKNMG GDITVSSSLPGKGSTFTLTVHAPAV AEEVEDAFDEDDMPLPALHVLLVEDIELNVIVAR SVLEKLGNSVDVAMTGKAALEMFA PGEYDLVLLDIQLPDMTGLDIARELTRRHTREDL PPLVALTANVLKDKKEYLDAGMDD VLSKPLSVPALTAMIKKFWDATDKEESTVTPEES DKAQALLDIPMLEQYIELVGPCLI TDGLAVFEKMMLGYLSVLESNLTARDKKGVVEEG HKIKGAAGSVGLRHLQQLGQQIQS PDLPAWEDNVVEWIEEMKQEWQHDVAVLKAWVAN AEKK"
misc-feature	complement(139434..1397 75)	/gene="STY3507" /note="Pfam match to entry PF00072 response-reg, Response regulator receiver domain, score 118.80, E-value 1.1e-31"
misc-feature	complement(139839..1404 77)	/gene="STY3507" /note="Pfam match to entry PF00512 signal, Histidine kinase, score 266.70, E-value 3e-76"
misc-feature	complement(140694..1408 88)	/gene="STY3507" /note="Pfam match to entry PF00989 PAS, PAS domain, score 47.70,"

gene	complement(141443..1423	/gene="STY3508"
	72)	
CDS	complement(141443..1423	/gene="STY3508"
	72)	
		/note="Orthologue of E. coli yhcC (YHCC-ECOLI); Fasta hit to YHCC-ECOLI (309 aa), 95% identity in 307 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07846.1" /db-xref="GI:16504394" /db-xref="SPTREMBL:Q8XFV9" /translation="MQLQKLVNMFGGDLLRRYGO KVHKLTLHGGSFPCPNRDGTIGRGG CTFCNVASFADAEQQHHSIAEQLAHQAHLVNRAK RYLAYFQAYTSTFAEVQVLRSMYQ QAVSQASIVGLCVGTRPDCVPQAVVDLLCEYKDQ GYEVWLELGLQTAHDKTLRRINRG HDFACYQRTTRIARERGLKVC AHLIVGLPGEQQA ECLQTMERVVETGV DGIKLHPLHI VKGSTMAKAW EAGRLNGIELDDYTLTAGEMIRHT PPEVIYHRISASARRPTLLAPLWC ENRWTGMVELDKYLNEHGVQGSALARPWIPPVA" /gene="STY3510" /note="synonym: gltB" /gene="STY3510" /EC-number="1.4.1.13" /note="Similar to Escherichia coli glutamate synthase [NADPH] large chain precursor GltB SW:GLTB-ECOLI (P09831) (1517 aa) fasta scores: E(): 0, 95.4% id in 1486 aa and to Pseudomonas aeruginosa glutamate synthase large subunit GltB TR:P95456 (EMBL:U81261) (1482 aa) fasta scores: E(): 0, 60.9% id in 1476 aa" /codon-start=1 /transl-table=11 /product="glutamate synthase [NADPH] large chain precursor" /protein-id="CAD07847.1" /db-xref="GI:16504395" /db-xref="GOA:Q8Z3F7" /db-xref="SPTREMBL:Q8Z3F7" /translation="MLYDKSLEKDNCGFGLIAHI EGEP SHKVVRTAIHALARMQHRGA ILADGKTGDGCGLLLQKPDRFFRIVAEERGWR LA KNYAVGMIFLNKDPELAAASRHIV EEELQQETLSIVGWRD VPTNEGVLGEIALSSLP R IEQIFVNAPAGWRPRDMERRLFIA RRRIEKRLQDDKDFYVCSLSNLVNIYKGLCMPAD LPRFYLDLADLRLESAICLFHQRF STNTVPRWPLAQPF RYLAHNGEINTITGNRQWAR ARTYKFQTP LIPDLQSAAPFVNET GSDSSSLDNMLELLLAGGMDIIRAMRLLVPPAWQ NNPDMQDLRAFFDFNSMHMEPWD GPAGIVMSDGRFAACNLDRNGLRPARYVITKDKL ITCASEVGIWDYQPDEVVEKGRVG PGELMVIDTRGGRILHSAETDDDLKSRHPYKAWM EKNVRRLVPFEELPDEEVGSRELD DDLLASYQKQFNYS AEELDSVIRVLGENGQEAVG SMGDDTPFAVLSSQPRIIYDYFRQ QFAQVTNPPIDPLREAHVMSLATSIGREMNVFCE AEGQAHRLSFKSPILLYSDFKQLT TMSEHHYRADWLDITFDVTETTL DATVKALCDKA EQMVRNGTVLLVLSDRNIGKNRLP VPAPMAVGAVQTRLVDQSLRCDANIIVETGSARD PHHFAVLLGFGATAIYPYLAYETL GRLIDTQAI AKNYRTVMQNYRNGINKGLYKIMSK MGISTIASYRCSKLF EAVGLHDDV VNLCFQGVVSRIGGASFDDFQQDLLNLSKRAWLA
gene	143044..147504	
CDS	143044..147504	

misc-feature 143173..143196

misc-feature 145420..146514

misc-feature 146740..147333

gene 147514..148932

CDS 147514..148932

misc-feature 147958..148848

VVRTLQQAVQSGEYSQYQYAKLVNERPAATLRD
LLAIHPDGEAVTIDEVEPASELFK
RFDTAAMSIGALSPEAHEALAEAMNSLGGNSNSG
EGGEDPARYGTNKVSRIKQVASGR
FGVTPAYLVNADVQIKVAQGAQKPGEGGQLPGDK
VTPYIAKLRYSVPGVTLISPPPHH
DIYSIEDLAQLIFDLKQVNPAMISVKLVSEPGV
GTIATGVAKAYADLITIAGYDGGT
GASPLSSVKYAGCPWELGLVETQQALVANGLRHK
IRLQVDGGLKTGVDIIKAAILGAE
SFGFGTGPMVALGCKYLRIHLNNCATGVATQDE
KLRKNHYHGLPFKVTNYFEFIARE
VRELMAVLGVTRLVDLIGRTDLLKELEGFTAKQQ
KLALSRLLETAEPHPGKALYCTEN
NPPFDNGVLNAQLLQQAKPFVDARQSKTFWFDIR
NTDRSVGASLSGYIAQTHGDOGLA
SDPIKAHFSGTAGQSFGVWNAGGVELYLTGDAND
YVGKGMAGGLIAIRPPVGS AFLSH
KASIIIGNTCLYGATGGRLYAAGRAGERFGVRNSG
AITVVEGIGDNGCEYMTGGIVCVL
GKTGVNFGAGMTGGFAYVLDEDEGEFRKRVNPELV
EVLVDVDSLAIHEEHLRGLITEHVQ
HTGSQRGEEILSRWSSFSTQFALVK
PKSSDVKALLGHRSRSAELRVQAQ"
/gene="STY3510"
/note="PS00017 ATP/GTP-binding
site motif A (P-loop)"
/gene="STY3510"
/note="Pfam match to entry PF01645
Glu-synthase, Conserved region in
glutamate synthase, score 820.90,
E-value 4.4e-243"
/gene="STY3510"
/note="Pfam match to entry PF01493
DUF14, Domain of unknown function
DUF14, score 360.20, E-value
2.1e-104"
/gene="STY3511"
/note="synonym: gltD"
/gene="STY3511"
/note="Fasta hit to P76440 (412
aa), 33% identity in 443 aa
overlap Orthologue of E. coli gltD
(GLTD-ECOLI); Fasta hit to
GLTD-ECOLI (471 aa), 95% identity
in 471 aa overlap"
/codon-start=1
/transl-table=11
/product="glutamate synthase
(NADPH) small chain"
/protein-id="CAD07848.1"
/db-xref="GI:16504396"
/db-xref="GOA:Q8Z3F6"
/db-xref="SPTREMBL:Q8Z3F6"
/translation="MSQNVYQFIDLQRVDPPKKP
LKLRKIEFVEIYEPFSEGQAQAQA
DRCLSCGNPYCEWKCPVHNYIPNWLKLANEGRIF
EAAELSHQTNLPEVCGRVCPQDR
LCEGSCTLHDEFGAVTIGNIERYINDKAFEMGWR
PDMTGVRQTDKRVAIIGAGPAGLA
CADVLTRNGVKAVVFDHRHPEIGLLTFGIPAFKL
EKEVMTRRREIFTGMGIEFKLNTE
VGRDVQLEDLLKDYDAVFLGVGTYQSMRGGLNE
DADGVFDALPFLIANTKQIMGFGE
TSDEPYVSMEGKRVVVLGGGDTAMDCVRTSIRQG
ATHVTCAYRRDEENMPGSRREVKN
AREEGVEFQFNVQPLGIEVNANGKVSGVKMVRTE
MGEPDAKGRRAEIVAGSEHVPA
DAVVMAGFGRPHSMEWLAKHSVELDSQGRIIAPE
RSDNAFQTSNPKIFAGGDIVRGSD
LVVTAIAEGRKAADGIMNYLEV"
/gene="STY3511"
/note="Pfam match to entry PF00070
pyr-redox, Pyridine
nucleotide-disulphide

gene	149140..150243	E-value 2e-33"
CDS	149140..150243	/gene="STY3512"
		/note="Orthologue of E. coli yhcG (YHCG-ECOLI); Fasta hit to YHCG-ECOLI (375 aa), 77% identity in 363 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="conserved hypothetical protein"
		/protein-id="CAD07849.1"
		/db-xref="GI:16504397"
		/db-xref="SPTREMBL:Q8Z3F5"
		/translation="MTNPTLAPQSDEYQQIHDGI IRLVDTARTETVRSINAIMTATYW EIGRRIVEFEQGGEARAAYGTQLIERLSVDLSQR YKRGFSNRNLWQIRTFYLCFQHIE IPQTLSAESSNLIPLAKTFPLPWSAYVRLLSVKD NDARTFYEKETLRNGWSVRQLDRQ IATQFYERTLLSHDKSAMLQQPAPAEPNVLPEQA IRDPFILEFLNLKDEYSESDLEDA LLSHLMDFMLELGDDFAFVGRQRRLRIDDSWFRV DLLFFHRRRLRCLLLVDLKVKGFGY ADAGQNMNMYLNYAKEHWTMPGENPPVGLVLCAGK GAGEAHYALTGLPNTIMASEYKVQ LPDEKLLTDELIRSQTMLETQLTRGGSLTTEKN"
gene	150360..151613	/gene="STY3513"
CDS	150360..151613	/note="synonym: codB"
		/gene="STY3513"
		/note="Similar to Escherichia coli cytosine permease codB SW:CODB-ECOLI (P25525) (419 aa) fasta scores: E(): 0, 82.5% id in 416 aa"
		/codon-start=1
		/transl-table=11
		/product="cytosine permease"
		/protein-id="CAD07850.1"
		/db-xref="GI:16504398"
		/db-xref="GOA:Q8Z3F4"
		/db-xref="SPTREMBL:Q8Z3F4"
		/translation="MSQDNNYSQGPVPAARKGV IPLTFVMLGLTFFSASMWTGGTLG TGLTYHDFFLAVFFGNLLGIYTAFLGYIGAKTG LSTHLLARYSFGVKGSWLP SLLLG STQVGWFGVGVAMFAIPVSKATGIDANILIAVSG LLMTLTIFFGISALTILSIVAVPA IVILGSYSVWLAVSGVGGLEHLKTIVPQTPLDFS SALALVVG SFVSAGTLTADFVRFG RHAKSAVLIAMVAFFLGNSLMFIFGAAGAAVGO ADISDVMIAQGLLLPAIVVLGLNI WTTNDNALYASGLGFANITGLSSRTL SVVNGIIG TVCALWLYNNFVGWLTFLSSAIPP IGGVIIADYLVNRRRYADFNTVRFIPVNWIAILS VALGIAAGHYVPGIVPVNAVILGGV FSYILLNPLFNRLAKSPEVSHAEQ"
misc-feature	150390..151553	/gene="STY3513"
		/note="Pfam match to entry PF02133 Transp-cyt-pur, Permeases for cytosine/purines, uracil, thiamine, allantoin, score 322.90, E-value 3.6e-93"
gene	151600..152880	/gene="STY3514"
CDS	151600..152880	/note="synonym: codA"
		/gene="STY3514"
		/note="Orthologue of E. coli codA (CODA-ECOLI); Fasta hit to CODA-ECOLI (426 aa), 84% identity in 426 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="cytosine deaminase"
		/protein-id="CAD07851.1"
		/db-xref="GI:16504399"

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/translation="MQNNNITIRQTRLQGHEGLW
QITIENGRFSRIEPQEATSLPQGE
VLDAEGGLAIPPFVEPHIHLDTTQTAGEPSWNQS
GTLFEGIERWAERKAMLT HEDVKA
RAMQTLKWQMANGIQYVRTHVDVSDPTLTALKAM
LEVKQEVAPWVDLQIVAFPPQEGIL
SYPNGEALLLEEAVRLGADVIGAIPHFEFTREYGV
ESLHKTFALAQKYDRLIDVHCDEI
DDEQSRFVETVAALAHRDGMGARVTASHTTAMHS
YNGAYASRLFRLLKMSGINFVANP
LVNIHLQGRFDTPKRRGVTRVKEMLEAGINVCF
GHDDVDFPWYPLGTANMLQVLHMG
LHVCQLMGYGQINDGLNLITTHSAKTLHLQDYGL
SVGNAANLVILPAENGFDVRRQT
PARYSIRHRRVIAETVPSQTTLHLTQPEAVTFKR
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gene      complement(152962..1534 /gene="STY3515"
29)
CDS       complement(152962..1534 /gene="STY3515"
29)

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/note="Fasta hit to YJGK-ECOLI
(150 aa), 32% identity in 148 aa
overlap Orthologue of E. coli
YHCH-ECOLI; Fasta hit to
YHCH-ECOLI (154 aa), 81% identity
in 154 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical
protein"
/protein-id="CAD07852.1"
/db-xref="GI:16504400"
/db-xref="GOA:Q8Z3F2"
/db-xref="SPTREMBL:Q8Z3F2"
/translation="MMMGEVQSLPSCGLHPRLLD
ALTLALAARPQEKAPGRYELQGDN
IFMNVMLTQTQMPAGKKAELHEQYIDIQLLLTG
V
ERIAFGMSGGAARQCEEMHVEEDYQ
LCSQIADDEQTITLQAGMFAVFMPEGPHKPGCAVG
EPDDIKKVVVKVRASLLAA"

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gene      complement(153426..1543 /gene="STY3516"
01)
CDS       complement(153426..1543 /gene="STY3516"
01)

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/note="Similar to several
including: Escherichia coli
hypothetical protein YhcI
SW:YHCI-ECOLI (P45425) (291 aa)
fasta scores: E(): 0, 74.9% id in
291 aa and to several kinases e.g.
Streptomyces coelicolor
glucokinase SW:GLK-STRCO () (317
aa) fasta scores: E(): 8.1e-18,
31.8% id in 314 aa Fasta hit to
YCFX-ECOLI (303 aa), 30% identity
in 306 aa overlap Orthologue of E.
coli yhcI (YHCI-ECOLI); Fasta hit
to YHCI-ECOLI (291 aa), 75%
identity in 291 aa overlap"
/codon-start=1
/transl-table=11
/product="possible kinase"
/protein-id="CAD07853.1"
/db-xref="GI:16504401"
/db-xref="GOA:Q8Z3F1"
/db-xref="SWISS-PROT:Q8Z3F1"
/translation="MTTLAIDIGGTKLAAALIDN
NLRISQRRELPTPASKTPDALREA
LKALVEPLRAEARQVAIASTGIIQEGMLLALNPH
NLGGLLHFPLVQTLETIAGLPTLA
VNDAQAAAWAEYHALPDDIRDMVFITVSTGVGGG
V
VVC DGKLLTGKGLAGHLGHTLAD
PHGPVCGCGRVGCVEAIIASGRGMAAAARDL LAGC
DAKTLFIRAGEGHQQAARHLVSQSA
QVIARMIADVKAITDCQCQVIGGSVGLAEGYLEQ

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misc-feature	complement (153753..154289)	AGLLGAALLAQGDTL" /gene="STY3516" /note="Pfam match to entry PF00480 ROK, ROK family, score 236.10, E-value 3.8e-69"
misc-feature	complement (153834..153917)	/gene="STY3516" /note="PS01125 ROK family signature"
gene	complement (154298..154977)	/gene="STY3518"
CDS	complement (154298..154977)	/pseudo /gene="STY3518" /note="Similar to several including: Escherichia coli hypothetical protein YhcJ SW:YHCJ-ECOLI (P45426) (229 aa) fasta scores: E(): 9e-28, 72.5% id in 109 aa and to Clostridium perfringens putative N-acetylmannosamine-6-p epimerase nanE TR:Q9S4L0 (EMBL:AF130859) (221 aa) fasta scores: E(): 8.5e-11, 48.8% id in 80 aa. Contains a frameshift mutation following codon 96." /pseudo /codon-start=1 /transl-table=11 /product="conserved hypothetical protein (pseudogene)"
gene	complement (155024..156514)	/gene="STY3519"
CDS	complement (155024..156514)	/note="synonym: nanT" /gene="STY3519" /note="Fasta hit to YJHB-ECOLI (405 aa), 35% identity in 452 aa overlap Orthologue of E. coli nanT (NANT-ECOLI); Fasta hit to NANT-ECOLI (496 aa), 95% identity in 496 aa overlap" /codon-start=1 /transl-table=11 /product="putative sialic acid transporter" /protein-id="CAD07855.1" /db-xref="GI:16504402" /db-xref="GOA:Q8XFJ3" /db-xref="SPTREMBL:Q8XFJ3" /translation="MSTSTQNIPWYRHLNRAQWR AFSAAWLGYLLDGFDFVLIALVLT EVQSEFGLTTVQAASLISA AFISRWFGLLLGAM GDRYGRRLAMVSSIILFSVGT LAC GFAPGYTTMFIARLVIGMGMAGEYGSSATYVIES WPKHLRNKASGFLISGFSVGAVVA AQVYSLVVPVWGWRALFFIGILPIIFALWLRKNI PEAEDWKEKHAGKAPVRTMVDILY RGEHRIINILMTFAAAAALWFCFAGNLQNA AIVA GLGLLCAVIFISFMVQSSGKRWPT GVMLMLVVLFAFLYSWPIQALLPTYLKTELAYDP HTVANVLFFSGFGAAVGCCVGGFL GDWLGTRKAYVCSLLASQILIIPVFAIGGTNVWV LGLLLFFQQMLGQGIAGILPKLIG GYFDTDQRAAGLGFTYNVGALGGALAPILGALIA QRDLGTALASLSFSLTFVVILLI GLDMPSRVQRWLRPEALRTHDAIDDKPFSGAVPL GSGKGAFVKTKS"
misc-feature	complement (155114..156457)	/gene="STY3519" /note="Pfam match to entry PF00083 sugar-tr, Sugar (and other) transporter, score 41.30, E-value

gene complement (156630..1575 /gene="STY3520"
23)

CDS complement (156630..1575 /gene="STY3520"
23)

/note="synonym: nanA"
/note="Orthologue of E. coli nanA
(NPL-ECOLI); Fasta hit to
NPL-ECOLI (296 aa), 91% identity
in 295 aa overlap"
/codon-start=1
/transl-table=11
/product="N-acetylneuraminate
lyase"
/protein-id="CAD07856.1"
/db-xref="GI:16504403"
/db-xref="GOA:Q8Z3F0"
/db-xref="SWISS-PROT:Q8Z3F0"
/translation="MAKALQGVMALLTPFDHQQ
QLDSESLRRLVRFNIGQGIDGLYV
GGSTGEAFVQSLAEREQVLEIVAEAEAKGKITLIA
HVGTVSTAESQQLASAAKRYGFDA
VSAVTPFYYPFSFEEHCDHYRAIIDSADGLPMVV
YNIPALSGVKLTLDQINTLVTLPG
VNALKQTSGLDFOMEQIRRAHPDLVLNGYDEIF
ASGLLAGADGGIGSTYNIMGWRYQ
GIVQALREGDVAKAQRLOTECNKVIDLLIKTGVF
RGLKTVLHYMDVVSVP LCRKPFAP
VDEKYLPAKALAQQLMEEKA"

misc-feature complement (156693..1574 /gene="STY3520"
51)

/note="Pfam match to entry PF00701
DHDPs, Dihydrodipicolinate
synthetase family, score 441.70,
E-value 6.3e-129"

misc-feature complement (157023..1571 /gene="STY3520"
15)

/note="PS00666 Dihydrodipicolinate
synthetase signature 2"

misc-feature complement (157350..1574 /gene="STY3520"
03)

/note="PS00665 Dihydrodipicolinate
synthetase signature 1"

gene complement (157658..1584 /gene="STY3521"
49)

CDS complement (157658..1584 /gene="STY3521"
49)

/note="Similar to several proposed
regulatory proteins e.g.
Escherichia coli hypothetical
transcriptional regulator Yhck
SW:YHCK-ECOLI (P45427) (263 aa)
fasta scores: E(): 0, 87.5% id in
263 aa and to Streptomyces
coelicolor putative
transcriptional regulator SCF55.06
TR:Q9RJQ8 (EMBL:AL132991) (253 aa)
fasta scores: E(): 6.6e-11, 27.2%
id in 254 aa"
/codon-start=1
/transl-table=11
/product="putative GntR-family
transcriptional regulator"
/protein-id="CAD07857.1"
/db-xref="GI:16504404"
/db-xref="GOA:Q8XFH8"
/db-xref="SWISS-PROT:Q8XFH8"
/translation="MDVMNAFDSQAEDSPTSLGR
SLRRRPLARKKLSEMVVEEELEQMI
RRHEFGEGEQLPSERELMAFFNVGRPSVREALAA
LKRKGLVQINNGERARVSRPSADT
IISELSGMAKDFTLHPGGIAHFQRLRLFFESSLV
RYAAEHATDEQIALLT KALEINSQ
SLDDNALFIRSDVEFHRVLAIEIPGNPIFMAIHVA
LLDWLIAARPSVPDRELHEHNNVS
YQQHIVIVDAIRQRDPDKADRALQTHLNSVSATW"

misc-feature complement(158165..1583 /gene="STY3521"
44)
/note="Pfam match to entry PF00392
gntR, Bacterial regulatory
proteins, gntR family, score
94.50, E-value 1.1e-27"

misc-feature complement(158213..1582 /gene="STY3521"
87)
/note="PS00043 Bacterial
regulatory proteins, gntR family
signature"

gene complement(158558..1590 /gene="STY3522"
58)
/note="synonym: sspB"

CDS complement(158558..1590 /gene="STY3522"
58)
/note="Orthologue of E. coli sspB
(SSPB-ECOLI); Fasta hit to
SSPB-ECOLI (165 aa), 89% identity
in 167 aa overlap"
/codon-start=1
/transl-table=11
/product="stringent starvation
protein B"
/protein-id="CAD07858.1"
/db-xref="GI:16504405"
/db-xref="SPTREMBL:Q8XGT9"
/translation="MDLSQLTPRRPYLLRAFYEW
LLDNQLTPHLVVDVMLPGVHVPME
YARDGQIVLNIAPRAVGNLELSNDEVRFNARFGG
VPRQVSVPPLAAVLAIYARENGAGT
MFEPEAAAYDEDVVS LNDDNTAGAESETVMSVID
GDKPDHDDSSPDDEPPPPRGGRP ALRVVK"

gene complement(159064..1597 /gene="STY3523"
02)
/note="synonym: sspA"

CDS complement(159064..1597 /gene="STY3523"
02)
/note="Orthologue of E. coli sspA
(SSPA-ECOLI); Fasta hit to
SSPA-ECOLI (211 aa), 98% identity
in 210 aa overlap"
/codon-start=1
/transl-table=11
/product="stringent starvation
protein A"
/protein-id="CAD07859.1"
/db-xref="GI:16504406"
/db-xref="SPTREMBL:Q8Z3E9"
/translation="MAVAANKRSVMTLFSGPTDI
YSHQVRIVLAEKGVSFIEHVEKD
NPPQDLIDLNPQSVPTLVDRSLTWESRIIMEY
LDERFPHPLMPVYPVARGESRLY
MHRIEKDWYTLNVIIVNGSASEVDSARKQLREEL
LAIAPVFGQKPYFLSDEFSLVDCY
LAPLLWRLPQLGIEFSGAGAKELKGYMTRVFERD
SFLASLTEAEREMRLGRG"

misc-feature complement(159121..1596 /gene="STY3523"
72)
/note="Pfam match to entry PF00043
GST, Glutathione S-transferases.,
score 166.00, E-value 1.9e-49"

gene complement(160017..1604 /gene="STY3524"
09)
/note="synonym: rpsI"

CDS complement(160017..1604 /gene="STY3524"
09)
/note="Orthologue of E. coli rpsI
(RS9-ECOLI); Fasta hit to
RS9-ECOLI (129 aa), 99% identity
in 129 aa overlap"
/codon-start=1
/transl-table=11
/product="30S ribosomal subunit
protein S9"

		/db-xref="GI:16504407"
		/db-xref="GOA:Q8XFX5"
		/db-xref="SWISS-PROT:Q8XFX5"
		/translation="MAENQYYGTGRRKSSAARVF IKPGNGKIVINQRSLEQYFGRETA RMVVRQPLELVDMVEKLDLYITVKGGGISGQAGA IRHGITRALMEYDESLRGELRKAG FVTRDARQVERKKVGLRKARRRPQFSKR"
misc-feature	complement(160020..160382)	/gene="STY3524"
		/note="Pfam match to entry PF00380 Ribosomal-S9, Ribosomal protein S9/S16, score 249.10, E-value 7.2e-77"
misc-feature	complement(160149..160205)	/gene="STY3524"
		/note="PS00360 Ribosomal protein S9 signature"
gene	complement(160425..160853)	/gene="STY3525"
		/note="synonym: rplM"
CDS	complement(160425..160853)	/gene="STY3525"
		/note="Orthologue of E. coli rplM (RL13-ECOLI); Fasta hit to RL13-ECOLI (142 aa), 100% identity in 142 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="50S ribosomal subunit protein L13"
		/protein-id="CAD07861.1"
		/db-xref="GI:16504408"
		/db-xref="GOA:P02410"
		/db-xref="SWISS-PROT:P02410"
		/translation="MKTFTAKPETVKRDWYVVDA TGKTLGRLATELARRLRGKHKA EYTPHVDTGDIYIIVLNADKVA VTGNKRTDKVYYHHTGHIGGI KQATFEEMIARRPERVIEIAV KGMLPKGPLGRAMFRKLKVYAG NEHNHAAQQPQVLDI"
misc-feature	complement(160428..160811)	/gene="STY3525"
		/note="Pfam match to entry PF00572 Ribosomal-L13, Ribosomal protein L13, score 305.00, E-value 9.2e-88"
misc-feature	complement(160473..160541)	/gene="STY3525"
		/note="PS00783 Ribosomal protein L13 signature"
gene	complement(161154..162278)	/gene="STY3526"
		/note="Orthologue of E. coli yhcm (YHCM-ECOLI); Fasta hit to YHCM-ECOLI (375 aa), 85% identity in 373 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="putative ATP/GTP-binding protein"
		/protein-id="CAD07862.1"
		/db-xref="GI:16504409"
		/db-xref="SPTREMBL:Q8Z3E8"
		/translation="MQSLSP TSRYLQALNEGTHQ PDDVQKEAVDRLETLYQALTAKKS SATPPGGLIARLGKLLGKNEPDAQIPVRGLYMWG GVGRGKTWLMDFYHSLPGERKLR LHFHRFMLRVHEELTALQGQIDPLDIIADRFKTE TDVLCFEFFVTDITDAMLLGGLM KALFARGITLVATSNIPPEELYNGLQRRARFLPA IDAIKQHC DIMNVDAGVDYRLRTL TQAH LWLTPLNDETRRQMDKLWLALAGAAREHAP"

		TLCVEARSQHDYIALSRLFHTVLLFDVPVMTPLM ENEARRFIALVDEFYERHVKLVVS AAPLYEIQGERLKFQERCLSRQLQEMQSAEYL KREHMP"
misc-feature	complement(162024..162047)	/gene="STY3526" /note="PS00017 ATP/GTP-binding site motif A (P-loop)"
gene	162465..162869	/gene="STY3527"
CDS	162465..162869	/gene="STY3527" /note="Orthologue of E. coli yhcb (YHCB-ECOLI); Fasta hit to YHCB-ECOLI (134 aa), 96% identity in 132 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07863.1" /db-xref="GI:16504410" /db-xref="SPTREMBL:Q8Z3E7" /translation="MFMTWEYALIGLVVGIIIGA VAMRFGNRKLRQQQALQYELEKNK AELEEYREELVSHFARSAELLDTMAHDYRQLYQY MAKSSSSLLPEMSAESNPFRNRLA ESEASNDQAPVQMPRDYSEGASGLLRSGAKRD"
gene	163026..164393	/gene="degQ"
CDS	163026..164393	/note="synonym: STY3528" /gene="degQ" /EC-number="3.4.21.-" /note="Similar to Escherichia coli protease DegQ SW:DEGQ-ECOLI (P39099) (455 aa) fasta scores: E(): 0, 90.1% id in 455 aa" /codon-start=1 /transl-table=11 /product="serine protease" /protein-id="CAD07864.1" /db-xref="GI:16504411" /db-xref="GOA:Q8Z3E6" /db-xref="SPTREMBL:Q8Z3E6" /translation="MKKHTQLLSALALSVGLTSL APFPALASIPGQVPGQATLPSLAP MLEKVLPAVVSVKVEGTATQSQKVPEEFKKFFGE DLPDQPSQPFEGLGSGVIIDAAKG YVLTNNHVINQAQKISIQLNDRGFEKLGIGDD QSDIALLLQIQNPSKLTQIAIADSD KLRVGDFAVAVGNPFGLGQTATSGIISALGRSGL NLEGLNFIQTDA SINRGNSGGAL LNLNGELIGINTAILAPGGGSIGIGFAIPSNMAQ TLAQQLIQFGEIKRGLLGKIGTEM TADIAKAFKLVQRGAFVSEVLPSNGSAKAGVKS GDVIISLNGKPLNSFAELRSRIAT TEPGTKVKLGLLRDGKPLEVEVTLDSENTSSASA EMIAPALQGATLSDGQLKDGTGKV KVDSVEKSSPAAQAGLQKDDVIIGVNRDRISIA EMRKVMAAKPSIIALQVVRGNENI YLLLR"
misc-feature	163302..163790	/gene="degQ" /note="Pfam match to entry PF00089 trypsin, Trypsin, score 75.70, E-value 3.5e-23"
misc-feature	163797..164069	/gene="degQ" /note="Pfam match to entry PF00595 PDZ, PDZ domain (Also known as DHR or GLGF)., score 79.80, E-value 5.5e-20"
misc-feature	164118..164363	/gene="degQ" /note="Pfam match to entry PF00595 PDZ, PDZ domain (Also known as DHR or GLGF)., score 54.40, E-value 2.5e-12"
misc-feature	164309..164332	/gene="degQ" /note="PS00017 ATP/GTP-binding site motif A (P-loop)"
gene	164486..165556	/gene="degS"

CDS	164486..165556	/gene="degS" /EC-number="3.4.21.-" /note="Similar to Escherichia coli protease degs precursor degs or hhob or htrH SW:DEGS-ECOLI (P31137) (355 aa) fasta scores: E(): 0, 91.6% id in 356 aa" /codon-start=1 /transl-table=11 /product="serine protease" /protein-id="CAD07865.1" /db-xref="GI:16504412" /db-xref="GOA:Q8XEX3" /db-xref="SPTREMBL:Q8XEX3" /translation="MFVKLLRSVAIGLIVGAILL AVMPSLRKINPIAVPQFDSTDETP ASYNFAVRRAPAVNVNVRSMNSTAHNQLEIRT LGSGVIMDQRGYIITNKHVINDAD QIIIVALQDGRVFEALLVGSDSLTDLAVLKINATG GLPTIPINTKTRTPHIGDVVLAIGN PYNLGQTITQGIISATGRIGLNPTGRQNFLQTD SINHGNSGGALVNSLGELMGINTL SFDKSNDDGETPEGLGFAIPFQLATKIMDKLIRDG RVIRGYIGIGGREIAPLHAQQGSG MDPIQGIVVNEVTPNGPAALAGIQVNDLIISVNN KPAVSALETMDQVAEIRPGSVIPV VVMRDDKQLTFQVTVQEYPASN"
misc-feature	164669..165217	/gene="degS" /note="Pfam match to entry PF00089 trypsin, Trypsin, score 92.90, E-value 1.2e-28"
misc-feature	165227..165502	/gene="degS" /note="Pfam match to entry PF00595 PDZ, PDZ domain (Also known as DHR or GLGF)., score 64.60, E-value 2.1e-15"
repeat-unit gene	166341..169683 complement(166342..1676 43)	/note="repeat element rep12" /gene="oadB"
CDS	complement(166342..1676 43)	/note="synonym: STY3531" /gene="oadB" /EC-number="4.1.1.3" /note="Similar to Salmonella typhimurium oxaloacetate decarboxylase beta chain OadB SW:DCOB-SALTY (Q03031) (433 aa) fasta scores: E(): 0, 98.2% id in 433 aa" /codon-start=1 /transl-table=11 /product="oxaloacetate decarboxylase beta chain" /protein-id="CAD07866.1" /db-xref="GI:16504413" /db-xref="GOA:Q8Z3E5" /db-xref="SPTREMBL:Q8Z3E5" /translation="MESLNALLQGMGLMHLGAGQ AIMLLVSLLLLWLAIKKEFPLLL LPIGFGGLLSNIPEAGMALTALESLLAHHDAGQL AVIAAKLNCAPDVHAIKEALALAL PSVQNQMENLAVDMGYTPGVLAIFYKVAIGSGVA PLVIFMGVGAMTDFGPLLNPRTL LLGAAAQFGIFATVLGALTNLNYFGLIAFTLPQAA AIGIIGGADGPTAIYLSGKLAPEL LGAIAVAAYSIMALVPLIQPPIMRALTSEKERKI RMVQLRRTVSKREKILFPVVLLLLV ALLLPDAAPLLGMFCFGNLMRESGVVERLSDTVQ NGLINIVTIFLGLSVGAKLVADKF LQPQTLGILLGLGVIAFGIGTAAGVLMKLLNLCS KNKINPLIGSAGVSAVPMAARVSN KVGLESNPQNFLMHAMGPNVAGVIGSAIAAGVM LKYVLAM"
gene	complement(167656..1694 31)	/gene="oadA"

CDS complement(167656..1694 /gene="oadA"
31)
/EC-number="4.1.1.3"
/note="Similar to Salmonella
typhimurium oxaloacetate
decarboxylase alpha chain OadA
SW:DCOA-SALTY (Q03030) (590 aa)
fasta scores: E(): 0, 98.6% id in
590 aa"
/codon-start=1
/transl-table=11
/product="oxaloacetate
decarboxylase alpha chain"
/protein-id="CAD07867.1"
/db-xref="GI:16504414"
/db-xref="GOA:Q8XGX8"
/db-xref="SPTREMBL:Q8XGX8"
/translation="MTIAITDVVLRLDAHQSLFAT
RLRLDDMLPIAAQLDDVGYGSLEC
WGGATFDACIRFLGEDPWLRLRELKKAMPKTPLO
MLLRGQNLLGYRHYADDVVERFVE
RAVKNGMDVFRVFDAMNDPRNMKAALQAVRSHGA
HAQGTLSYTTSPAHTLQTWLDLLE
QLLETGVDSIAIKDMSGILTPMAAFELVSEIKKR
FEVRLHLHCHATTGMAEMALLKAI
EAGVDGVDTAISSMSATYGHPPATEALVATLAGTE
HDTGLDILKLENIAAYFREVRKKY
HAFEGQLKGYDSRILVAQVPGMLTNLESQKQ
NAADRLDQVLAIEIPRVREDLGFIP
LVTPTSQIVGTQAVLNVLGTGERYKTIKETAGIL
KGEYGHTPVPVNAALQARVLEGS
PVTCTPADLLKPELAEELEADVRRQAEKGITLAG
NAIDDLTVLFPQIGLKFLNRRH
NPAAFEPLPQAEAAQPVAKAEKPAASGIYTVVE
GKAFVVRVSDGGDISQLTTAVPAA
SSAPVQAAAPAGAGTPVTAPLAGNIWKVIATEGO
SVAEGDVLLILEAMKMETEIRAAQ
AGTVRGIAVKSGDAVSVDLMTLA"

misc-feature complement(167662..1678 /gene="oadA"
65)
/note="Pfam match to entry PF00364
biotin-lipoyl, Biotin-requiring
enzymes, score 101.10, E-value
2.2e-26"

misc-feature complement(167740..1677 /gene="oadA"
93)
/note="PS00188 Biotin-requiring
enzymes attachment site"

misc-feature complement(168577..1694 /gene="oadA"
07)
/note="Pfam match to entry PF00682
HMGL-like, HMGL-like, score
326.40, E-value 3.4e-94"

gene complement(169447..1696 /gene="oadG"
89)
/note="synonym: STY3533"

CDS complement(169447..1696 /gene="oadG"
89)
/EC-number="4.1.1.3"
/note="Similar to Salmonella
typhimurium oxaloacetate
decarboxylase gamma chain oadG
SW:DCOG-SALTY (Q03032) (83 aa)
fasta scores: E(): 3.7e-22, 85.5%
id in 83 aa."
/codon-start=1
/transl-table=11
/product="oxaloacetate
decarboxylase gamma chain"
/protein-id="CAD07868.1"
/db-xref="GI:16504415"
/db-xref="GOA:Q8Z3E4"
/db-xref="SWISS-PROT:Q8Z3E4"
/translation="MTNAALLLGEGFTLMLLGMG
FVLAFLFLLIFAIRGMSAVITRFF"

gene	complement (169845..170462)	NA" /gene="STY3534"
CDS	complement (169845..170462)	/note="synonym: ttdB" /gene="STY3534" /note="Orthologue of E. coli ttdB (TTDB-ECOLI); Fasta hit to TTDB-ECOLI (201 aa), 67% identity in 203 aa overlap" /codon-start=1 /transl-table=11 /product="tartrate dehydratase" /protein-id="CAD07869.1" /db-xref="GI:16504416" /db-xref="GOA:Q8XEV4" /db-xref="SPTREMBL:Q8XEV4" /translation="MTKKILTTPIKDEDLADIKA GDIIYLNHIVTCRDVAHRRRLIEG GRELPVDVVRGGAILHAGPIVRPIKGEDDKFEMVS VGPTTSMRMEKFEKEFIAQTGVKL IVGKGGMGKGTEEGCAEHKALHCVFPAGCAVVAA VCVEEIEDAQWRDLGMPETLWVCR VKEFGPLIVSIDTHGNNLFEQNKIIFNQRKEIVA DEICQNVFSFIK"
gene	complement (170462..171361)	/gene="STY3535"
CDS	complement (170462..171361)	/note="synonym: ttdA" /gene="STY3535" /note="Orthologue of E. coli ttdA (TTDA-ECOLI); Fasta hit to TTDA-ECOLI (303 aa), 54% identity in 294 aa overlap" /codon-start=1 /transl-table=11 /product="tartrate dehydratase" /protein-id="CAD07870.1" /db-xref="GI:16504417" /db-xref="GOA:Q8XFJ9" /db-xref="SPTREMBL:Q8XFJ9" /translation="MSKSEQISHMTDVMKAFVGY TGKVLPPDDVTAKLEDLHKKETSKL ADVIFTTMIENQRLAKELDRPSCQDTGVIQFLVE CGTNFPLIGELEALLREAVIKATV DSPLRHNSVETFDEYNTGKNVKGKTPTVFWEIVP NSDQCSIYTYMAGGGCSLPGKAMV LMPGAGYEGVTRFVLDMVTSYGLNACPPLLVGVG VATSVETAALLSKKALMRPIGSHN ENERAASLEKMLEDGINKIGLGPQMSGNTSVMG VNIENTARHPSTIGVAVNVGCWSH RKGHIVFDKDLNYTITSHSGVNF"
gene	complement (171394..172746)	/gene="STY3536"
CDS	complement (171394..172746)	/gene="STY3536" /note="Similar to Methanobacterium thermoautotrophicum sodium/dicarboxylate or sulfate cotransporter mth788 TR:O26881 (EMBL:AE000857) (443 aa) fasta scores: E(): 2.1e-31, 29.9% id in 428 aa. Contains multiple possible membrane spanning hydrophobic domains" /codon-start=1 /transl-table=11 /product="possible membrane transport protein" /protein-id="CAD07871.1" /db-xref="GI:16504418" /db-xref="GOA:Q8Z3E3" /db-xref="SPTREMBL:Q8Z3E3" /translation="MTYFLYGNNFSSSILDTISY IIDWIIINMEPITLTLCLLVFAIV"

		FIDTNVILFVAMFIVGGALFETGM ANKVGGVITRFAKTEKQLIFTIMVVVGLMSGVLS NTGTAAVLIPVVIGVAAKSGFSRS RLLMPLVFAAALGGNLSLIGAPGNLIAQSALQNI GGGFGFFEYAKIGLPMLICGILYF LTIGYRFLPNNATGGEVGSVGEQRDYSHVPQWKQ RLSLVVLIIATILGMIFEKKIGVSL AVTGCIGALVLVSGVLTEKQAYKAIDSQTIFIF GGTLALAKALEMTGAGKLVADYVI GMLGQNSSPFMLLIAVFALSVMTNFMSTATTA LLVPVSLSIAAGMGADPRAVLMAT VIGGSCAYATPIGMPANMMVLSAGGYKFVDYAKA GIPLIIVSTIVSLILLPILFPFHP "
misc-feature	complement (171424..171831)	/gene="STY3536"
		/note="Pfam match to entry PF00939 Na-sulph-symp, Sodium:sulfate symporter transmembrane region, score 29.30, E-value 1.1e-07"
misc-feature	complement (172444..172641)	/gene="STY3536"
		/note="Pfam match to entry PF00939 Na-sulph-symp, Sodium:sulfate symporter transmembrane region, score 7.40, E-value 0.19"
gene	complement (172873..173478)	/gene="STY3537"
CDS	complement (172873..173478)	/gene="STY3537"
		/note="Similar to Streptomyces coelicolor putative GntR-family transcriptional regulator scgd3.11C TR:Q9XA67 (EMBL:AL096822) (216 aa) fasta scores: E(): 7.4e-11, 33.2% id in 189 aa" /codon-start=1 /transl-table=11 /product="possible transcriptional regulator" /protein-id="CAD07872.1" /db-xref="GI:16504419" /db-xref="SPTREMBL:Q8Z3E2" /translation="MLRKAILSRELVEGQEITLE GIAGMVGVSMPVREAFQILAADG LIKVRPNKGAVVLGINEQTIREHYEIRALLESEA VAKASRPGTDISRIAEVHYAAEKA LAENNSAEYSDLNQAFHMEIWNVAGNEKMKMLLC NMWNGLSMGHKVTEEEYAVISIQE HKSILQALELHDETLARQRMREHIIRSMENMLTR YVGDPISA"
gene	complement (173525..174154)	/gene="STY3538"
CDS	complement (173525..174154)	/gene="STY3538"
		/note="Similar to the DNA-binding domains of several regulatory proteins e.g. Pseudomonas putida VanR protein vanR TR:Q9R9S9 (EMBL:AJ252091) (237 aa) fasta scores: E(): 9.7e-06, 46.4% id in 69 aa" /codon-start=1 /transl-table=11 /product="possible GntR-family transcriptional regulator" /protein-id="CAD07873.1" /db-xref="GI:16504420" /db-xref="GOA:Q8Z3E1" /db-xref="SPTREMBL:Q8Z3E1" /translation="MKKIQRQTQTRDHITQMLRYE ILSGNIKAGEELAQGSIAEQGLS RMPVREALQSLEQEGFLIRLPNRHMQVAHLEADR VSHIFRVIAAMAAEMFSLIPSEVG DALLIRAQALAVAEDKSCELECHAMLISYVNNRY

QESAQLFAELADVIRQGRRDEIGQVMQRYFLSLA
 EIMRQHMKDWESEAE"
 /gene="STY3538"
 /note="Pfam match to entry PF00392
 gntR, Bacterial regulatory
 proteins, gntR family, score
 44.90, E-value 2.5e-12"
 /gene="STY3539"
 /note="synonym: mdh"
 /gene="STY3539"
 /note="Orthologue of E. coli mdh
 (MDH-ECOLI); Fasta hit to
 MDH-ECOLI (312 aa), 95% identity
 in 312 aa overlap"
 /codon-start=1
 /transl-table=11
 /product="malate dehydrogenase"
 /protein-id="CAD07874.1"
 /db-xref="GI:16504421"
 /db-xref="GOA:Q8Z3E0"
 /db-xref="SPTREMBL:Q8Z3E0"
 /translation="MKVAVLGAAGGIGQALALL
 KNQLPSGSELSLYDIAPVTPGVAV
 DLSHIPTAVKIKGFSGEDATPALEGADVVLISAG
 VARKPGMDRSDLEFNVNAGIVKNLV
 QQIAKTCPKACVGIITNPVNTTVAIAAEVLKKAG
 VYDKNKLFVTTLDIIRSNTFVAE
 LKGKLPTEVEVPVIGGHSGVTILPLLSQIPGVSF
 TEQEAAELTKRIONAGTEVVEAKA
 GGSATLSMGQAAARFGLSLVRALQGEKGVVECA
 YVEGDGQYARFFSQPLLLGKNGVE
 ERKSIGTLSTFEQHSLDAMLDLTKKDIQLGEDFI
 NK"
 /gene="STY3539"
 /note="Pfam match to entry PF00056
 ldh, lactate/malate dehydrogenase,
 score 474.50, E-value 8.5e-139"
 /gene="STY3539"
 /note="PS00068 Malate
 dehydrogenase active site
 signature"
 /gene="argR"
 /note="synonym: STY3540"
 /gene="argR"
 /note="Similar to Salmonella
 typhimurium arginine repressor
 argR SW:ARGR-SALTY (P37170) (156
 aa) fasta scores: E(): 0, 100.0%
 id in 156 aa, and to Escherichia
 coli arginine repressor argR or
 xerA SW:ARGR-ECOLI (P15282) (156
 aa) fasta scores: E(): 0, 94.9% id
 in 156 aa Orthologue of E. coli
 argR (ARGR-ECOLI); Fasta hit to
 ARGR-ECOLI (156 aa), 95% identity
 in 156 aa overlap"
 /codon-start=1
 /transl-table=11
 /product="arginine repressor"
 /protein-id="CAD07875.1"
 /db-xref="GI:16504422"
 /db-xref="GOA:P37170"
 /db-xref="SWISS-PROT:P37170"
 /translation="MRSSAQEELVRAFKALLKE
 EKFSQGEIVLALQDQGFENINQS
 KVSRLTKFGAVRTRNAKMEMVYCLPAELGVPTT
 SSPLKNLVLDIDYNDVAVVIHTSP
 GAAQLIARLLDSLGAEGILGTIAGDDTIFTTPA
 SGFSVRDLYEAILLELFEQEL"
 /gene="argR"

gene	176461..176724	Arg-repressor, Arginine repressor, score 391.80, E-value 6.7e-114"
CDS	176461..176724	/gene="STY3542" /gene="STY3542" /note="Fasta hit to YCFR-ECOLI (85 aa), 34% identity in 88 aa overlap Fasta hit to YJFN-ECOLI (100 aa), 34% identity in 93 aa overlap Fasta hit to YAH0-ECOLI (91 aa), 31% identity in 91 aa overlap Fasta hit to YJFY-ECOLI (91 aa), 33% identity in 87 aa overlap Fasta hit to YBIJ-ECOLI (86 aa), 47% identity in 88 aa overlap Orthologue of E. coli YHCN-ECOLI; Fasta hit to YHCN-ECOLI (87 aa), 78% identity in 87 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07876.1" /db-xref="GI:16504423" /db-xref="SPTREMBL:Q8Z3D9" /translation="MKIKTTVATLSILSVLSFGA FAAEPISAEQAQNREAIESVSVSA IGSSPMDMNAMLSKKKADEQGATAYHITEARSGSN WHATAELYK" /gene="STY3543" /gene="STY3543" /note="Fasta hit to YCFR-ECOLI (85 aa), 34% identity in 89 aa overlap Fasta hit to YJFN-ECOLI (100 aa), 34% identity in 93 aa overlap Fasta hit to YJFY-ECOLI (91 aa), 30% identity in 86 aa overlap Fasta hit to YKGI-ECOLI (83 aa), 35% identity in 80 aa overlap Fasta hit to YBIJ-ECOLI (86 aa), 37% identity in 90 aa overlap Parologue of E. coli YHCN-ECOLI; Fasta hit to YHCN-ECOLI (87 aa), 53% identity in 88 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07877.1" /db-xref="GI:16504424" /db-xref="SPTREMBL:Q8XEN2" /translation="MKT KYIIASLGLATLLSFGA NAAVHQVNAEQAQNLQPMGTISVS QIGSTPMDMRQEIVAKAEKAGANSYRIELKEGD NWHATAELYK" /gene="STY3544" /gene="STY3544" /note="Orthologue of E. coli YHCO-ECOLI; Fasta hit to YHCO-ECOLI (90 aa), 77% identity in 90 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07878.1" /db-xref="GI:16504425" /db-xref="SPTREMBL:Q8XFF0" /translation="MNVYTFDFNDIKNQSDFYRE FTQTFGLASEKVSDDLTLWDVMS DILPLPLEIEFVHLPDKLRRRYGALILLFDEAEE ELEGRLLRFNVRH" /gene="STY3545"
gene	176828..177094	
CDS	176828..177094	
gene	complement(177154..1774	
CDS	26) complement(177154..1774 26)	
gene	complement(177598..1795	
	65)	

CDS

complement(177598..1795 /gene="STY3545"
65)

/note="Orthologue of E. coli yhcP
(YHCP-ECOLI); Fasta hit to
YHCP-ECOLI (655 aa), 92% identity
in 655 aa overlap. Contains
multiple possible membrane
spanning hydrophobic domains and a
possible N-terminal signal
sequence."

/codon-start=1

/transl-table=11

/product="putative membrane
protein"

/protein-id="CAD07879.1"

/db-xref="GI:16504426"

/db-xref="SPTREMBL:Q8Z3D8"

/translation="MGIFSIANQHIRFAVKLACA
IVLALFIGFHFQLETPRWAVLTAA
IVAAGPAFAAGGEPYSGAIRYRGMLRIIGTFIGC
IAALIIIIISMIRAPLLMILVCCVW
AGFCTWISSLVRIENSYAWGLSGYTALIIIVITIQ
TEPLLTPOFALERCEIVIGIGCA
ILADLLFSPRSIKQEVDRELDCLLVAQYQLMQLC
IKHGDSEEDVNAWGDVLRRTAALE
GMRSNLNMESSRWVRANRRLKALNTLSLTITQS
CETYLIQNTRPELITDTFRELFT
PVETVQDVHRQLKRMRRVIVWTGERETPVTLYSW
VGAATRYLLLKRGVISNTKISATE
EEILQGEPPVKVESAEERHAMVNFWRITLSCILG
TLFWLWTGWTSGNGAMVMIAVVTS
LAMRLPNPRMVCIDFIYGTALPLGLLYFLVII
PNTQQSMLLLCLSLAVLGFFIGIE
VQKRRLGSMGALASTINIIVLDNPMTFHFQFLD
SALGQIVGCMLAFIVILLVRDKSK
DRTGRVLLNQFVSAAVSAMTTNVVRRKENRLPAL
YQQLFLLMNKFPGLPKFRLALTM
IIAHQRLRDAPIPVNEDLSVFHRQLRRTADHVIS
AGSDDKRRRYFGQLLDELDIYQEK
LRIWEAPPQVTEPVKRLTGMLHKYQNALTDS"

gene

complement(179571..1805 /gene="STY3546"
03)

CDS

complement(179571..1805 /gene="STY3546"
03)

/note="synonym: yhcQ"
/gene="STY3546"

/note="Fasta hit to YDHJ-ECOLI
(299 aa), 39% identity in 286 aa
overlap Fasta hit to YJCR-ECOLI
(343 aa), 30% identity in 337 aa
overlap Orthologue of E. coli yhcQ
(YHCQ-ECOLI); Fasta hit to
YHCQ-ECOLI (310 aa), 93% identity
in 310 aa overlap. Contains a
possible N-terminal signal
sequence."

/codon-start=1

/transl-table=11

/product="possible exported
protein"

/protein-id="CAD07880.1"

/db-xref="GI:16504427"

/db-xref="GOA:Q8XF83"

/db-xref="SPTREMBL:Q8XF83"

/translation="MKTLTRKLSRTAITLVLVIL
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DQPRYQKALAEAEADVAYYQVLAQ
EKRQEAGRNRNLGVQAMSREEIDQANNVLQTVLH
QLAKAQATRDALAKLDLERTVIRAP
ADGWVTNLNVYAGEFITRGSTAVALVKKNSFYVQ
AYMEETKLEGVRPGYRAEITPLGS
NRVLKGTVDVAAGVTNASSTSDAKGMATIDSNL
EWWRLAQRPVVRIRLDEQQGNLWP
AGTTATVVITGKQDRDASQDSFFRKLHRLREFG
"

68)

gene complement(180511..180714) /note="Pfam match to entry PF00529 HlyD, HlyD family secretion protein, score 135.20, E-value 1.2e-36" /gene="STY3546a"

CDS complement(180511..180714) /gene="STY3546a"

gene 180896..181825 /note="Similar to Escherichia coli hypothetical protein Yhcr SW:YHCR-ECOLI (P46478) (90 aa) fasta scores: E(): 5.6e-29, 98.5% id in 67 aa" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07881.1" /db-xref="GI:16504428" /db-xref="SPTREMBL:Q8XEK3" /translation="MSLFPVIVVFGLSFPPPIFFE LLLSLAIFWLVRRLVPTGIYDFV WHPALFNTALYCCLFYLIISRLFV" /gene="STY3547"

CDS 180896..181825 /gene="STY3547"

misc-feature 180905..181324 /note="Fasta hit to YHJC-ECOLI (299 aa), 31% identity in 293 aa overlap Fasta hit to YAFB-ECOLI (304 aa), 31% identity in 290 aa overlap Fasta hit to YEAT-ECOLI (307 aa), 30% identity in 293 aa overlap Orthologue of E. coli YHCS-ECOLI; Fasta hit to YHCS-ECOLI (309 aa), 95% identity in 309 aa overlap" /codon-start=1 /transl-table=11 /product="probable LysR-family transcriptional regulator" /protein-id="CAD07882.1" /db-xref="GI:16504429" /db-xref="GOA:Q8XFH1" /db-xref="SPTREMBL:Q8XFH1" /translation="MERLKRMSVFAKVVEFGSFT AAARQLQMSVSSISQTVAKLEDEL QVKLLNRSTRSIGLTEAGKIYYQGCRRMLHEVQD VHEQLYAFNNTPIGTLRIGCSSTM AQNVLAGLTAKLLKEYPGLAVNLVTGIPAPDLIA DGLDVVIRVGALQDSSLFSRRLGA MPMVVCAAKPYLAQYGVPEKPADLSSHSWLEYSV RPDNEFELIAPEGISTRILIPQGRF VTNDPMTLVRWLTAGTGIAYVPLMWVIDEINRGD LEILLPRYQSDPRPVYALYTEKDK LPLKVQVVINALTDYFVDVAHLFQGMHGRGKEK" /gene="STY3547"

misc-feature 180947..181039 /note="Pfam match to entry PF00126 HTH-1, Bacterial regulatory helix-turn-helix protein, lysR family, score 170.30, E-value 3.1e-47" /gene="STY3547"

gene complement(181948..183393) /note="PS00044 Bacterial regulatory proteins, lysR family signature" /gene="tldD"

CDS complement(181948..183393) /note="synonym: STY3548" /gene="tldD"

gene 180896..181825 /note="Similar to Escherichia coli protein TldD which suppresses the inhibitory activity of the carbon storage regulator CsrA SW:TLDD-ECOLI (P46473) (481 aa)" /gene="STY3547"

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481 aa"
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/transl-table=11
/product="TldD protein"
/protein-id="CAD07883.1"
/db-xref="GI:16504430"
/db-xref="SPTREMBL:Q8XFQ3"
/translation="MSLNLVSEQLLAANGLNHQD
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AYADQISLLALEQSAQAARTIVRE
NGEGKVKTAAVAHQPLYTTLDPLQSMSREEKLD
ILRRVDKAAREADKRVQEVNASLT
GVYELILVAATDGTAAADVRPLVRLSVSVQVEED
GKRER GASGGGRFGYEF LADLD
GEVRADAWAKEAVRMALVNLSAVAAPAGTLPVVL
GAGWPGVLLHEAVGHGLEGDFNRR
GTSVFSGQIGEQVASALCTVDDGTMMNRRGSVA
IDDEGTPGQYNVLIENGVLKGYMQ
DKLNARLMGAAPTGNRRRESYAHLPMPRMTNTYM
LAGQSTPQEIIESVEYGIYAPNFG
GGQVDITSGKFVFTSEAYLIENGKVTTTPVKGAT
LIGSGIETMQQISMVGNLKLNDNG
VGVCGKEGQSLPVGVGQPTLKVDNLTVGGTA"
/misc-feature complement(182398..1832 /gene="tldD"
94)
/Note="Pfam match to entry PF01523
PmbA-TldD, Putative modulator of
DNA gyrase, score 385.30, E-value
6.3e-112"
gene complement(183538..1873 /gene="STY3549"
38)
CDS complement(183538..1873 /gene="STY3549"
38)
/Note="This CDS is similar to two
adjoining E. coli hypothetical
proteins. The N-terminus is
similar to yhdR SW:YHDR-ECOLI
(P46476) (282 aa) fasta scores:
E(): 0, 82.0% id in 272 aa and the
C-terminus is similar to yhdP
SW:YHDP-ECOLI (P46474; P76676;
P46475) (986 aa) fasta scores:
E(): 0, 79.9% id in 987 aa.
Contains a possible N-terminal
signal sequence."
/codon-start=1
/transl-table=11
/product="possible exported
protein"
/protein-id="CAD07884.1"
/db-xref="GI:16504431"
/db-xref="SPTREMBL:Q8Z3D7"
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WQFRDLTFWQLNFRNTNPLQSSDGEIETSRLSD
LFLRQFDHFDLRDSQISFLTLGQ
RAELAIPQLTWLNGKERHRAEGEVSLSLSTGQHG
VMQVRMDLRDDGLLNNGRVWLQA
DDIDVKPWLKGWMDNVALQTARFSLEGWMTLSK
GEIAGGDVWLKQGGASWLGDNTTH
TSLVDNLTAQISREQPGWQFYIPDTRITLDGKPW
PSGALTVAWLPOQDVGENHTRSD
ELRIRASNLELAGLEALRPLAAKLSPVLGEIWQA
TQPSGKIATLALDIPLQATEKTRF
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KVAMQQA KMPYETVFRAPLEIENG
VATLSWLKNENGFLDGRDIDVKAKAVHARGGFR
YLQPTGDEPWLGI LAGISTDDGSQ
AWRYFPENLMGKALVDYLSGAIQGG EADNATLVY
GGNPHLFPYKHNEGQFEVLVPLRN
ATFAFQPDWPALKNLNIELDFLNDGLWMRSDSVD
LGGVKASKLAAAI PDYSKEKLLID

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DVNARLHLDIPLDGEQVTAEGDVS
 LRNNSLFIKPLNSTLKNLNGKFSFVNGALKSGPL
 TANWFNQPLNLDfstTEGAKAYQV
 AVNLGNWQPTRMGVLPQNDALSGSVTWNGKV
 GIDLPHYADTTYHIELNGDLRNVS
 SHLPSPLNKPAGEAIPVNIQADGNLKSfALTGSA
 GSKNHFNsrWLLNqKLtLDRAIWt
 TDSRTIPPLPAQQGVeLNLPALDGAQWLALFQKG
 AADNVSSSAEFpQrVTLRTPALSL
 GGQQWNNLSVVSAPSLNGTKIEAQGREVNATLLM
 RNHAPWLANIKYLYNPGVAKTHA
 SSPTPTSPLASANTISFRGWPDQLRCEECWLWG
 QKYGRIDGDFAIKGNTLTLANGLI
 DTGFARLKANGewVNAPGNERTSLKGSfLHGsnLD
 TAAGFFGISTPIQNASfNVdYDLH
 WRNPPCQPEeATLNGILRTRLGKGefTDLSSGHA
 GQLRLRLSFDALLRKLRFDFRDTF
 SEGfYFDSIHSTAWIKDGVLHTDDTLVDGLEADI
 AMKGSVDLVRRLDMEAVVAEIS
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 ILRYRITGPVDAPQINEVLrQPRK ESQQ"

gene complement(187449..1889 18) /gene="rnG"

CDS complement(187449..1889 18) /note="synonym: STY3550" /gene="rnG"

/EC-number="3.1.4.-"
 /note="Similar to Escherichia coli ribonuclease G cafa r rnG
 SW:RNG-ECOLI (P25537; P76677) (488 aa) fasta scores: E(): 0, 96.7% id in 488 aa"
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 /transl-table=11
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 /protein-id="CAD07885.1"
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 /db-xref="GOA:Q8XGR0"
 /db-xref="SPTREMBL:Q8XGR0"
 /translation="MTAELLVNVTpSETRVAYID
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 RVSRVLPGMQAafVDIGLDKAAfLHASDIMPHTe
 CVAGDEQKQfTVRDISELVRQGD
 LMVQVVKDPLGtKGARLTtDITLPSRYLVfMPGA
 SHVGVSQRIESESERERLKKVVAE
 YCDEQGGfIIRTAaEGVCEEDLASDAAYLKRVWT
 KVMERKKRPQTRYQMYGELALAQR
 VLRDFADAQLDRIRVDSRLTYESLLEfTAEYIPE
 MTSKLEHYSGHQPIFDLYDVENEI
 QRALERKVELKSGGYLIIDQTEAMTTVDINTGAF
 VGHRNLDDTIFNTNIEATQAIARQ
 LRLRNLGGIIIDfIDMNNEDHRRRVLHSLEQAL
 SKDRVKTSINGfSPLGLVEMTRKR
 TRESVEHVLcNECPTCHGRGTvKTVETVCYEIMR
 EIVRVHHAYDSDRFLVYASPAVAE
 ALKGEEShALAEVEIFVGKQVKVQVEPLYNQEQF
 DVVMM"

misc-feature complement(188553..1888 16) /gene="rnG"

/note="Pfam match to entry PF00575 S1, S1 RNA binding domain, score 68.20, E-value 3.3e-17"

gene complement(188908..1895 01) /gene="STY3551"

CDS complement(188908..1895 01) /note="synonym: yhdE" /gene="STY3551"

/note="Fasta hit to YCEF-ECOLI (207 aa), 38% identity in 185 aa overlap Orthologue of E. coli yhdE (YHDE-ECOLI); Fasta hit to YHDE-ECOLI (197 aa), 85% identity in 197 aa overlap"
 /codon-start=1
 /transl-table=11

		protein"
		/protein-id="CAD07886.1"
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		/db-xref="SWISS-PROT:P58631"
		/translation="MTTLYLASGSPRRQELLIQL GFSFEQVVPGIEEQRRVQESAQQY VVRLAREKAQAGVALVPRDLPVLGADTIVVLNGE VLEKPRDAAHAAEMLRLLSGNTHQ VMTAVALADSQQTLDCLVVTEVTFRTLSAQDITG YVASGEPLDKAGAYGIQGRGGCFV RKINGSYHAVVGLPLVETYELLSHFNALRDKRDK HDG"
gene	complement(189510..190001)	/gene="STY3552"
CDS	complement(189510..190001)	/note="synonym: mreD" /gene="STY3552"
		/note="Orthologue of E. coli mreD (MRED-ECOLI); Fasta hit to MRED-ECOLI (162 aa), 94% identity in 162 aa overlap" /codon-start=1 /transl-table=11 /product="rod shape-determining protein"
		/protein-id="CAD07887.1"
		/db-xref="GI:16504434"
		/db-xref="SPTREMBL:Q8XGG6"
		/translation="MVASYRSQGRWVIWLSFLIALLLQIMPWPDDIIVFRPNWVLLIL LYWILALPHRVNVGTGFVMGAILDLISGSTLGVR ALSMSIVAYLVALKFQLFRNLALW QQALVVMLLSLAVDIIVFWAEFLVINVSFRPEVF WSSVNVGLWLPWLFLLMRKVRQQF AVQ"
gene	complement(190001..191053)	/gene="STY3553"
CDS	complement(190001..191053)	/note="synonym: mreC" /gene="STY3553"
		/note="Orthologue of E. coli mreC (MREC-ECOLI); Fasta hit to MREC-ECOLI (367 aa), 91% identity in 349 aa overlap" /codon-start=1 /transl-table=11 /product="rod shape-determining protein"
		/protein-id="CAD07888.1"
		/db-xref="GI:16504435"
		/db-xref="SPTREMBL:Q8Z3D6"
		/translation="MKPIFSRGPQLIRLILAVL VALGVIIADSRGLGTFEQIRTYMDT AVSPFYFISNGPRELLDSVSQTLASRDQLELENR ALRQELLKNSDLLMLGQYKQENA RLRELLGSPLRQDEQKMVTQVISTVNDPYSQV IDKGSVNGVYEGQPVISDKGVVGO VVAVAKLTSRVLLICDATHALPIQVLRNDIRVIA AGNGCTDDLQLEHLPAINTDIRVGD VLVTSGLGGRFPEGYPVAVVSSVKLDTQRAYTVI QARPTAGLQRLRYLLLLWGADRNG ANPMTPEEVHRVANERLMQMMPOVLPSPDAMGPP APVPDPATGITQPSAGQTPPVSTQ SSPSGATTSPARAPGG"
gene	complement(191118..192161)	/gene="mreB"
CDS	complement(191118..192161)	/note="synonym: STY3554" /gene="mreB"
		/note="Similar to Escherichia coli rod shape-determining protein MreB mreB SW:MREB-ECOLI (P13519; P76678) (347 aa) fasta scores: E(): 0, 100.0% id in 347 aa" /codon-start=1 /transl-table=11


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protein"
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/db-xref="GOA:P13519"
/db-xref="SWISS-PROT:P13519"
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FMRPSRVLVCPVGATQVERRAIRESAQGAGAR
EVFLIEEPMAAAIGAGLPVSEATG
SMVVDIGGGTTEVAVISLNGVVYSSSVRIGGDRF
DEAIINYVRRNYGSLIGEATAERI
KHEIGSAYPGDEVREIEVRGRNLAEGVPRGFTLN
SNEILEALQEPLTGIVSAVMVALE
QCPPELASDISERGMVLTGGGALLRNLDRLLMEE
TGIPVVVAEDPLTCVARGGGKALE
MIDMHGGDLFSEE"
gene      complement (192469..1944 /gene="STY3555"
09)

CDS      complement (192469..1944 /note="synonym: yhdA"
09)      /gene="STY3555"

        /note="Orthologue of E. coli yhdA
        (YHDA-ECOLI); Fasta hit to
        YHDA-ECOLI (646 aa), 84% identity
        in 646 aa overlap. Contains a
        possible N-terminal signal
        sequence."
        /codon-start=1
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        /product="putative lipoprotein"
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        /db-xref="SPTREMBL:Q8Z3D5"
        /translation="MRLTTKFSAFITLLTGLTIF
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        LLQERSVYSHSRARGYRPAGTSD
        MYRELVVPLIKHPGMSLRLVYQDPMGNYFHSLIT
        TAPLTLAIGFIVLILFLSVRWLQR
        QLSGQELLEIRSTRILNGERGANVRGSVYEWPAR
        TSSALDVLLSEIQFAHEQRSRLDT
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        AAARNAALQGGNSWAIYDDTLPEK
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        HHRELMCRIYDGKEEVSSAEYMPM
        VLQFGLSEEYDRLQISRLITLLGYWPDENLAMQL
        TVESLIRPRFQRWLRDTLMQCEKS
        QRNRIIIELAEADVCHISRLQPIRLVNALGVR
        VAVTQAGLTLVSTSWIKALNVELL
        KLHPSLVRNIEKRTENQLLVQSLVEACAGTPTQV
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        DFFASSQLLDTNVKKYSQRYSV"
misc-feature complement (192505..1932 /gene="STY3555"
27)

        /note="Pfam match to entry PF00563
        DUF2, Domain of unknown function
        2, score 392.30, E-value 4.6e-114"
misc-feature complement (193267..1937 /gene="STY3555"
61)

        /note="Pfam match to entry PF00990
        DUF9, Domain of unknown function
        DUF9, score 109.70, E-value
        5.7e-29"
misc-feature complement (194332..1943 /gene="STY3555"
64)

        /note="PS00013 Prokaryotic
        membrane lipoprotein lipid
        attachment site"

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CDS	194613..195587	<pre> /note="synonym: yhdH" /gene="STY3556" /note="Orthologue of E. coli yhdH (YHDH-ECOLI); Fasta hit to YHDH-ECOLI (324 aa), 89% identity in 323 aa overlap" /codon-start=1 /transl-table=11 /product="possible oxidoreductase" /protein-id="CAD07891.1" /db-xref="GI:16504438" /db-xref="GOA:Q8XG63" /db-xref="SPTREMBL:Q8XG63" /translation="MQALILEQQDGKTLASVQHL EESQLPAGDVTVDVHWSSSLNYKDA LAITGKGKIIIRHFMIPGIDFAGTVHASEDPRFH AGQEVLLTGWGVGENHWGGLAERA RVKGDWLVALPAGLSSRNAMIIGTAGFTAMLCVM ALEDAGIRPQDGEVVVTGASGGVG STAVALLHKLGYQVAAVSGRESTHGYLEKSLGANR ILSRDEFAESRPLEKQLWAGAITD VGDKVLAKVLAQMNYGGCVAACGLAGGFALPTTV MPFILRNVRLOQGVDSVMTPPARRA EAWARLVKDLPESFYAQAATEITLADAPKFADAI INNQVQGRITLVKIK" </pre>
misc-feature	194652..195581	<pre> /gene="STY3556" /note="Pfam match to entry PF00107 adh-zinc, Zinc-binding dehydrogenases, score 118.50, E-value 1.2e-31" </pre>
misc-feature	194964..195011	<pre> /gene="STY3556" /note="PS00038 Myc-type, 'helix-loop-helix' dimerization domain signature" </pre>
gene	195700..196704	<pre> /gene="STY3557" </pre>
CDS	195700..196704	<pre> /gene="STY3557" /note="Orthologue of E. coli P76342; Fasta hit to P76342 (334 aa), 88% identity in 334 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07892.1" /db-xref="GI:16504439" /db-xref="GOA:Q8XES1" /db-xref="SWISS-PROT:Q8XES1" /translation="MKKIRPLTEADVTAESAFFM QRRQVLKALGISAAALSLPSTAQA DLFSWFKGNDRPKAPAGKPLEFSQPAAWRSDLAL TPEDKVTGYNNFYEFGLDKADPAA NAGSLKTEPWTLKISGEVAKPFTLDYDDLTHRFP LEERIYRMRCVEAWSMVVPWIGFP LYKLLAQAOPTSHAKYVAFETLYAPDDMPGQKDR FIGGGLKYPYVEGLRLDEAMHPLT LMTVG VYGKALPPQNGAPIRLIWPWKYGFKGIS IVSIKLTRERPPTTWNL SAPNEYG FYANVNPVHDHPRWSQATERFIGSGGILDVQRQP TLLFNNGYANEVASLYRGLNLRNF " </pre>
gene	196705..197304	<pre> /gene="STY3558" </pre>
CDS	196705..197304	<pre> /gene="STY3558" /note="Orthologue of E. coli P76343; Fasta hit to P76343 (211 aa), 85% identity in 195 aa overlap" /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07893.1" /db-xref="GI:16504440" /db-xref="GOA:Q8Z3D4" /db-xref="SWISS-PROT:Q8Z3D4" /translation="MRLTVKQITWLKVCCLHLAGE </pre>

gene	197698..198168	HFTGRTALKFLLATLLVSPLARYAKQPLLIRTRR LLGLWCFVWATLHLTSYALLELGI HNLALLGSELISRPLYTLGIISWLVLALTLTST QFAQRKLGKRWQTLHNVVYLVAIL APIHYLWSVKILSPQPVIYAALALALLALRYRKF RQWWR"
CDS	197698..198168	/gene="STY3559" /note="synonym: accB" /gene="STY3559" /note="Orthologue of E. coli accB (BCCP-ECOLI); Fasta hit to BCCP-ECOLI (156 aa), 93% identity in 156 aa overlap" /codon-start=1 /transl-table=11 /product="biotin carboxyl carrier protein" /protein-id="CAD07894.1" /db-xref="GI:16504441" /db-xref="GOA:Q8XGD9" /db-xref="SPTREMBL:Q8XGD9" /translation="MDIRKIKKLIELVEESGISE LEISEGEESVRISRTTANAGFPVM QQAYAAPMMQPPALSNAVAPAATPAMEAPAAAEI SGHIVRSPMVGTFYRTPSPDAKAF IEVGQKVNVDGTLTLCIVEAMKMMNQIEADKAGTVK AILVESGQPVEFDEPLVIE"
misc-feature	197938..198162	/gene="STY3559" /note="Pfam match to entry PF00364 biotin-lipoyl, Biotin-requiring enzymes, score 131.30, E-value 1.7e-35"
misc-feature	198031..198084	/gene="STY3559" /note="PS00188 Biotin-requiring enzymes attachment site"
gene	198179..199528	/gene="STY3560"
CDS	198179..199528	/note="synonym: accC" /gene="STY3560" /note="Orthologue of E. coli accC (ACCC-ECOLI); Fasta hit to ACCC-ECOLI (449 aa), 97% identity in 449 aa overlap" /codon-start=1 /transl-table=11 /product="biotin carboxylase" /protein-id="CAD07895.1" /db-xref="GI:16504442" /db-xref="GOA:Q8XF58" /db-xref="SPTREMBL:Q8XF58" /translation="MLDKIVIANRGEIALRILRA CKELGIKTVAVHSSADRDLKHVLL ADETVCIGPAPSVKSYLNIPAIISAAEITGAVAI HPGYGFLSENANFAEQVERSGFIF IGPKADTIRLMGDKVSAITAMKKAGVPTVPGSDG PLGDDMNANRAHAKRIGYPVIIKA SGGGGGGRGMRVVRSDAELAQSISMTKAEAKAAPS NDMVYMEKYLENPRHIEIQVLADG QGNAIYLAERDCSMQRRHQKVVEEAPAPGITPEL RRYIGERCAKACVDIGYRGAGTFE FLFENGIFYFIEMNTRIQVEHPVTEMITGVDLIK EQLRIAAGQPLSITQDEVVVRGHA VECRINAEDPNTFLPSGKITRFHAPGGFGVRWE SHIYAGYTVPPYYDSMIGKLICYG ENRDVAIARMKNALQELIIDGIKTNIDLQTRIMN DEHFQHGGTNIHYLEKKLGLQEK"
misc-feature	198188..199288	/gene="STY3560" /note="Pfam match to entry PF00289 CPSase-L-chain, Carbamoyl-phosphate synthase (CPSase), score 710.50, E-value 7.6e-210"
misc-feature	198638..198682	/gene="STY3560" /note="PS00866 Carbamoyl-phosphate synthase subdomain signature 1"
misc-feature	199034..199057	/gene="STY3560"

gene	199637..199879	synthase subdomain signature 2"
CDS	199637..199879	/gene="STY3561"
		/note="Similar to Escherichia coli hypothetical protein YhdT SW:YHDT-ECOLI (P45566) (80 aa) fasta scores: E(): 5.2e-30, 85.0% id in 80 aa, and to Haemophilus influenzae hypothetical protein HI0974.1 SW:YHDT-HAEIN (P46455) (85 aa) fasta scores: E(): 9.1e-12, 41.0% id in 78 aa"
		/codon-start=1
		/transl-table=11
		/product="conserved hypothetical protein"
		/protein-id="CAD07896.1"
		/db-xref="GI:16504443"
		/db-xref="SPTREMBL:Q8Z3D3"
		/translation="MDARFVQAHKEARWALWLTL CYLAAWLVAAAYLSGDSPPGITGLPH WFEMACLLTPLVFILLCWAMVKFIYRDIPLEDDA AA"
gene	199869..201320	/gene="STY3562"
CDS	199869..201320	/note="synonym: panF"
		/gene="STY3562"
		/note="Orthologue of E. coli panF (PANF-ECOLI); Fasta hit to PANF-ECOLI (483 aa), 94% identity in 483 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="sodium/pantothenate symporter (pantothenate permease)"
		/protein-id="CAD07897.1"
		/db-xref="GI:16504444"
		/db-xref="GOA:Q8Z3D2"
		/db-xref="SPTREMBL:Q8Z3D2"
		/translation="MQLEVILPLVAYLVVVFGVS IYAMRKRTAGTFLNEYFLGSRSMG GIVLAMTLTATYISASSFIGGPGAAYKYGLGWVL LAMIQLPAVWLSLGLGKKFALA RRYNAVTLNDMLFARYQSRLLVWLASLSLLVAFI GAMTVQFIGGARLLETAAGIPYET GLLIFGVSIALYTAFFGGFRASVLNDTLQGLVMLV GTIVLLVGVVHAAGGLHQAVDTLH ALDPKLVTPQGADDILSPAFTSFVWLVCFGVIG LPHTAVRCISYKDSKAVHRGIIIG TIVVAILMFGMHLAAGLGRAVLPDLTPDLVIPT LMVKVLPPFAAGIFLAAPMAAIMS TINAQLLQSSATI IKDLYLNLRPDQMONEIRLKR MSAAILTLGALLLLAAWKPPEMI IWLNLLAFGGLEAVFLWPLVLGLYWERANAAGAL SAMIVGGVLYALLATFNIQYLGFI PIVPALLLSLLAFLIGNRFGSSASQATVLSTDK"
misc-feature	199974..201164	/gene="STY3562"
		/note="Pfam match to entry PF00474 SSF, Sodium:solute symporter family, score 663.00, E-value 1.5e-195"
misc-feature	200331..200408	/gene="STY3562"
		/note="PS00456 Sodium:solute symporter family signature 1"
misc-feature	201108..201170	/gene="STY3562"
		/note="PS00457 Sodium:solute symporter family signature 2"
gene	201332..202213	/gene="STY3563"
CDS	201332..202213	/note="synonym: prmA"
		/gene="STY3563"
		/note="Orthologue of E. coli prmA (PRMA-ECOLI); Fasta hit to PRMA-ECOLI (293 aa), 96% identity in 292 aa overlap"
		/codon-start=1
		/transl-table=11

		methyltransferase" /protein-id="CAD07898.1" /db-xref="GI:16504445" /db-xref="GOA:Q8XGI2" /db-xref="SPTREMBL:Q8XGI2" /translation="MPWIIQLKLNTTGANAEEELSD ALMEAGAVSITFQDTHDTPVFEPL PGETRLWGD TDVIGLFD AETDMKDVVAILEQHPL LGAGFAHKIEQLEDKDWEREWMDN FHPMRFGERLWICPSWRDIPDENAVNVMLDPGLA FGTGTHPTTSLCLQWLDGLDLNGK TVIDFGCGSGILAI AALKLGA AKAIGIDIDPQAI QASRDNAERNGVSDRLELYLPKDQ PEAMKADV VVANILAGPLRELAPLISVLPVEGGL LGLSGILASQAESVCDAYAE LFTL DPVVEKEEWCRITGRKK"
gene	202993..203838	/gene="STY3564"
CDS	202993..203838	/note="synonym: yhdG" /gene="STY3564" /note="Fasta hit to YOHI-ECOLI (315 aa), 31% identity in 255 aa overlap Orthologue of E. coli yhdG (YHDG-ECOLI); Fasta hit to YHDG-ECOLI (321 aa), 96% identity in 281 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07899.1" /db-xref="GI:16504446" /db-xref="GOA:Q8Z3D1" /db-xref="SPTREMBL:Q8Z3D1" /translation="MMSSNPQVWESDKSRLRMVH VDEPGIRTVQIAGSDPVEMADAAR INVESGAQI IDINMGCPAKKVN RKLGSALLQYP DLVKSILIGVVNAVDPVPTLKIRT GWAPEHRNCVEIAQLAEDCGIQALT IHGRTRACL FNGEAEYDSIRAVKQKVSIP IIAN GDITNPHKARAVLDYTGADALMIGRAAQGRPWIF REIQHYLDTGELLPLPLAEVKRL LCTHVRELHDFYGOAKGYRIARKHVS WYLQEHAP DDQFRRTFN AIEDASEQLEALEAY FENFA"
misc-feature	202993..203835	/gene="STY3564"
misc-feature	203152..203208	/note="Pfam match to entry PF01207 UPF0034, Uncharacterized protein family UPF0034, score 416.60, E-value 2.4e-121" /gene="STY3564" /note="PS01136 Uncharacterized protein family UPF0034 signature"
gene	203864..204160	/gene="STY3565"
CDS	203864..204160	/note="synonym: fis" /gene="STY3565" /note="Orthologue of E. coli fis involved in regulation and activation of upstream rRNA promoters and Hln-mediated DNA inversion (FIS-ECOLI); Fasta hit to FIS-ECOLI (98 aa), 100% identity in 98 aa overlap" /codon-start=1 /transl-table=11 /product="Fis DNA-binding protein" /protein-id="CAD07900.1" /db-xref="GI:16504447" /db-xref="GOA:P11028" /db-xref="SWISS-PROT:P11028" /translation="MFEQRVNSDVLTVSTVNSQD QVTQKPLRDSVKQALKNYFAQLNG QDVNDLYELVLAEEVEQPLLDMMVMQYTRGNQTRAA LMMGINRGTLRKKLKKYGMN"
gene	204246..205130	/gene="STY3566"
CDS	204246..205130	/note="synonym: yhdJ" /gene="STY3566"

		(YHDJ-ECOLI); Fasta hit to YHDJ-ECOLI (294 aa), 80% identity in 283 aa overlap" /codon-start=1 /transl-table=11 /product="putative adenine-specific DNA-modification methylase" /protein-id="CAD07901.1" /db-xref="GI:16504448" /db-xref="GOA:Q8XF74" /db-xref="SPTREMBL:Q8XF74" /translation="MKAECEPQYFGDESKKIIHG DALTELKKLPSESIDLIFADPPYN IGKDFDGMVESWDEASFLAWLYECIDECHRVLKK HGTMYIMNSTENMPYIDLKCRRLF TIKSRIVWSYDSSGVQAKKYFGSMYEPILMMVK PKSYTFNRDAILVETTTGAKRALI DYRKNPPQYPYNQKKVPGNVWSFPRVRYLMDEYEN HPTQKPSALLKRIILASSNPSTV LDPFAGSFTTGAVAAASGRKFIGIELNNEYVKMG LRRLSVTSHYSENELAKVKKRKTQ NLSKKQRNVGINALSSEK" /gene="STY3566" /note="PS00092 N-6 Adenine-specific DNA methylases signature"
misc-feature	204354..204374	
misc-feature	204459..205013	/gene="STY3566" /note="Pfam match to entry PF01555 N6-N4-Mtase, DNA methylase, score 203.70, E-value 2.9e-57"
gene	205528..207138	/gene="STY3568"
CDS	205528..207138	/gene="STY3568" /note="Similar in parts to several e.g. Synechocystis sp nitrogen fixation positive activator protein nlfL TR:P72843 (EMBL:D90901) (840 aa) fasta scores: E(): 0, 44.1% id in 279 aa. Contains multiple possible membrane spanning hydrophobic domains and a possible N-terminal signal sequence. Contains C-terminal deletion relative to S. typhimurium" /codon-start=1 /transl-table=11 /product="putative exported protein" /protein-id="CAD07902.1" /db-xref="GI:16504449" /db-xref="GOA:Q8Z3D0" /db-xref="SPTREMBL:Q8Z3D0" /translation="MPVSEYNHILVAVSFAVAIF ASYTALNMAGRVAGSARSNARIWL MGGGFALGVGIWEMHFVGMAMDHAMNMRFPFL TGLSMLIAIGSSLFALWLVS AEKL RLRRLLPALVMGLGISAMHYTGMAALQFASIIV WNSAWVALSIIIIALLASCGALWLT FRLRNEGTDVALRRAGAAVLMGIAIAGMHYAGMK AAHFPQNWPMEHARGVDSNWLAVLV SVVALTILGITLLVSLFDARLQARTALLASSLAQ ANQELAQALHDTLTRLPNRVLLE DRLEQAISKANRESTSFALLFMDLDGFKAVNDAY GHDIGDKLLVAVTHRLNQPLSGQF TLARIGGDEFVLLAEVSAPDEAASLASALVHSID APFTIDPYELVVTLVSVGIALYPLD GKNERELMFNADAAMYHTKHTGRNGYHFFQPSMN MLAQTLQLMNDLWLALERQELRL VYQPKFQAPAGPIVGFEALLRWYHPKQGVLPDQ FLPLAEKTGLIVTIGSWVIDEACR QLREWHLQGYALWSVAVTGNGKWSGLPD" /gene="STY3568" /note="Pfam match to entry PF00990 DUF9, Domain of unknown function"
misc-feature	206287..206778	

gene	207104..207529	8.2e-59" /gene="acrE" /note="synonym: STY3569" /pseudo
CDS	207104..207529	/gene="acrE" /note="This CDS appears to be a gene remnant which is highly similar to the very C-terminus of Escherichia coli acriflavin resistance protein E precursor acrE or envC SW:ACRE-ECOLI (P24180) (385 aa) fasta scores: E(): 0, 88.8% id in 134 aa" /pseudo /codon-start=1 /transl-table=11 /product="acriflavin resistance protein E (pseudogene)" /db-xref="PSEUDO:CAD07903.1" /db-xref="REMTREMBL:CAD07903"
gene	207541..210655	/gene="acrF" /note="synonym: STY3570" /pseudo
CDS	207541..210655	/gene="acrF" /note="Similar to Escherichia coli acriflavin resistance protein f acrF or envD SW:ACRF-ECOLI (P24181) (1034 aa) fasta scores: E(): 0, 89.7% id in 906 aa. There is a frameshift mutation after codon 906. The sequence has been checked and is believed to be correct Fasta hit to ACRB-ECOLI (1049 aa), 80% identity in 907 aa overlap Fasta hit to YHIV-ECOLI (1037 aa), 70% identity in 906 aa overlap Fasta hit to ACRD-ECOLI (1037 aa), 63% identity in 907 aa overlap Parologue of E. coli acrF (ACRF-ECOLI); Fasta hit to ACRF-ECOLI (1034 aa), 90% identity in 906 aa overlap" /pseudo /codon-start=1 /transl-table=11 /product="acriflavin resistance protein F (pseudogene)"
misc-feature	207541..210258	/gene="acrF" /note="Pfam match to entry PF00873 ACR-tran, AcrB/AcrD/AcrF family, score 1760.20, E-value 0" /pseudo
misc-feature	210290..210628	/gene="acrF" /note="Pfam match to entry PF00873 ACR-tran, AcrB/AcrD/AcrF family, score 232.80, E-value 4.8e-66" /pseudo
gene	210892..211113	/gene="STY3572" /note="synonym: yhdV"
CDS	210892..211113	/gene="STY3572" /note="Orthologue of E. coli yhdV (YHDV-ECOLI); Fasta hit to YHDV-ECOLI (73 aa), 99% identity in 73 aa overlap. Contains a possible N-terminal signal sequence" /codon-start=1 /transl-table=11 /product="possible lipoprotein" /protein-id="CAD07905.1" /db-xref="GI:16504450" /db-xref="SPTREMBL:Q8XG38" /translation="MKRLIPVALLTTLTAGCAHD SPCVPVYDDQGRVLVHTNTCMKGTT QDNWETAGAIAGGAAVAGLTMGIIALSK"

		/note="PS00013 Prokaryotic membrane lipoprotein lipid attachment site"
gene	complement (211939..212058)	/gene="5S-rRNA"
rRNA	complement (211939..212058)	/gene="5S-rRNA"
		/note="hit to 5S-rRNA 1..120 score: 573 percent id: 97.50"
tRNA	complement (212096..212171)	/product="tRNA-Thr"
		/note="tRNA Thr anticodon GGT, Cove score 88.70"
gene	complement (212320..212439)	/gene="5S-rRNA"
rRNA	complement (212320..212439)	/gene="5S-rRNA"
		/note="hit to 5S-rRNA 1..120 score: 582 percent id: 98.33"
gene	complement (212540..215545)	/gene="23S-rRNA"
rRNA	complement (212540..215545)	/gene="23S-rRNA"
		/note="hit to 23S-rRNA 487..2904 score: 11323 percent id: 96.73 hit to 23S-rRNA 1..540 score: 2601 percent id: 97.96"
tRNA	complement (215739..215814)	/product="tRNA-Glu"
		/note="tRNA Glu anticodon TTC, Cove score 59.80"
gene	complement (215900..217441)	/gene="16S-rRNA"
rRNA	complement (215900..217441)	/gene="16S-rRNA"
		/note="hit to 16S-rRNA 1..1542 score: 7406 percent id: 97.92"
gene	complement (217822..218367)	/gene="STY3573"
		/note="synonym: hemG"
CDS	complement (217822..218367)	/gene="STY3573"
		/note="Orthologue of E. coli HEMG-ECOLI; Fasta hit to HEMG-ECOLI (181 aa), 88% identity in 181 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="protoporphyrinogen oxidase"
		/protein-id="CAD07906.1"
		/db-xref="GI:16504451"
		/db-xref="GOA:Q8Z3C9"
		/db-xref="SPTREMBL:Q8Z3C9"
		/translation="MKTLILFSTRDGQTREIASY LASELKEMGIWADVNLHRAEEPD WDSYDRVVIGASIRYGHYHSAFQEFVKKYATRLN GMPSAFYSVNLVARKAEKRTPQTN SYARKFLMSSPWRPDYCAVIAGALRYPRYRWYDR LMIKLIMKMSGGETDTSKEVVYTD WEQVAHFAREIAHLTNKSSAK"
misc-feature	complement (218200..218364)	/gene="STY3573"
		/note="Pfam match to entry PF00258 flavodoxin, Flavodoxins, score 23.70, E-value 2.6e-05"
misc-feature	complement (218305..218355)	/gene="STY3573"
		/note="PS00201 Flavodoxin signature"
gene	complement (218379..219830)	/gene="trkH"
		/note="synonym: STY3574"
CDS	complement (218379..219830)	/gene="trkH"


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trk system potassium uptake
protein TrkH SW:TRKH-ECOLI
(P21166; P76769) (483 aa) fasta
scores: E(): 0, 97.1% id in 483 aa
Fasta hit to TRKG-ECOLI (485 aa),
41% identity in 481 aa overlap"
/codon-start=1
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/product="trk system potassium
uptake protein"
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/db-xref="SPTREMBL:Q8Z3C8"
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MILPGLVALIYRDGAGGAFTQTFF
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VLGSVGALPFI FSESPNLTITDAF
FESFSGLT TTTGATT LVGLDSLPHAILFYRQMLQW
FGGMGIIVLAVAILPVLGVGGMQL
YRAEMPGPLKDNKMRPRIAETAKTLWLIYVLLTV
ACALALWFAGMPAFDAIGHSFSTI
AIGGFSTHDASVGYFDSPTINTIIAIFLLISGCN
YGLHFSLLSGRSLKVYWRDPEFRM
FIGVQLTLVVICTLVLFHNIYDSALTTLNQAFF
QVVSMTTAGFTTDSIARWPLFLP
VLLLCSAFIGGCAGSTGGGLKVIRILLFLKQGNR
ELKRLVHPNAVYSIKLGNRALPER
ILEAVWGFFSAYALVFIVSMLAIATGVDDFSAF
ASVVATLNNLGPGLGVVADNFASM
NPVAKWILIANMLFGRLEVFTLLVLFTPTFWRE"
gene      complement(219869..2204 /gene="STY3575"
83)
CDS      complement(219869..2204 /note="synonym: yigZ"
83)      /gene="STY3575"
        /note="Orthologue of E. coli yigZ
        (YIGZ-ECOLI); Fasta hit to
        YIGZ-ECOLI (205 aa), 91% identity
        in 204 aa overlap"
        /codon-start=1
        /transl-table=11
        /product="conserved hypothetical
        protein"
        /protein-id="CAD07908.1"
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        /db-xref="GOA:Q8Z3C7"
        /db-xref="SPTREMBL:Q8Z3C7"
        /translation="MDSWLIPAAPVTVVVEIKKS
        RFITLLAHTDGVEAAKAFVELVRA
        EHPDARHHCAAWVAGAPDDSQQLGFSDDGEPAGT
        AGKPMLAQLMGSGVGEITAVVVRY
        YGGILLGTGGLVKAYGGGVNQALRQLATQRKTPL
        TEYTLQCEYQQLAGIEALLGQFAG
        KIVSSDYQASVRLRVALPFAHVNAFSTKLADFSR
        GSLQLLAIEE"
misc-feature complement(219872..2204 /gene="STY3575"
11)
        /note="Pfam match to entry PF01205
        UPF0029, Uncharacterized protein
        family UPF0029, score 326.60,
        E-value 2.9e-94"
misc-feature complement(220157..2202 /gene="STY3575"
46)
        /note="PS00910 Uncharacterized
        protein family UPF0029 signature"
gene      complement(220483..2218 /gene="STY3576"
14)
CDS      complement(220483..2218 /note="synonym: pepQ"
14)      /gene="STY3576"
        /note="Orthologue of E. coli pepQ
        (PEPQ-ECOLI); Fasta hit to
        PEPQ-ECOLI (443 aa), 96% identity
        in 443 aa overlap"

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/transl-table=11
/product="proline dipeptidase"
/protein-id="CAD07909.1"
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/db-xref="SPTREMBL:Q9L6L4"
/translation="MESLAALYKNHIVTLQERTR
DVLARFKLDALLIHSGELEFNVFLD
DHPYPFKVNPQFKAWVPVTQVPNCWLLVDGVNKP
KLWFYLPVDYWHNVEPLPTSFWTE
EVEVVALPKADGIGSQLPAARGNIGYIGPVPERA
LQLDIAASNINPKGVIDYLHYRA
YKTDYELACMREAQKMAVSGHRAAEEAFRSGMSE
FDINLAYLTATGHRDTPVPYSNIV
ALNEHA AVLHYTKLDHQAPSEMRSFLLDAGAEYN
GYAADLTRTWSAKSDNDY AHLVKD
VNDEQLALIAMKAGVSYVDYHIQFHQRIAKLLR
KHQIITDMSEEAMVENDLTGPFMP
HGIGHPLGLQVHDVAGFMQDDSGTHLAAPSKYPY
LRCTRVLQPRMVLTIIEPGIYFIES
LLAPWREGPFPSKHFNWQKIEALKPFGGIRIEDNV
VIHENGVENMTRDLKLA"
/gene="STY3576"

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misc-feature complement(220513..221337)

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/note="Pfam match to entry PF00557
Peptidase-M24, metallopeptidase
family M24, score 346.70, E-value
2.6e-100"

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misc-feature complement(220774..220812)

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/note="PS00491 Aminopeptidase P
and proline dipeptidase signature"
/gene="STY3577"

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gene 222004..224193

CDS 222004..224193

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/note="synonym: fadB"
/gene="STY3577"
/note="Fasta hit to YFCX-ECOLI
(714 aa), 36% identity in 684 aa
overlap Orthologue of E. coli fadB
(FADB-ECOLI); Fasta hit to
FADB-ECOLI (729 aa), 95% identity
in 729 aa overlap"
/codon-start=1
/transl-table=11
/product="large (alpha) subunit of
the fatty acid-oxidizing
multienzyme complex"
/protein-id="CAD07910.1"
/db-xref="GI:16504455"
/db-xref="GOA:Q8Z3C6"
/db-xref="SWISS-PROT:Q8Z3C6"
/translation="MLYKGD TLYLDWLEDGIAEL
VFDAPGSVNKLDTATVASLGQALE
VLEKQHD LKGLLLRSNKAAFI VGADITEFLSLFL
VP EEQLSQWLHFANSVFNRLEDLP
VPTLAAVNGYALGGGCECVLATDYRLATPDLRIG
LPETKLGIMPGFGGGSVRLPRMLGA
DSALEIIAAGKDVGA EHALKIGLVDGVVKQECLI
EGAIAVLRQAITGDLDWRAKRQPK
LEPLKLSKIEAAMSFTIAKGMVAQTAGKHYPAPM
TAVKTIEAAARFGREEALNLENKS
FVPLAHTNEARALVGIFLNDQYVKGKAKKLT KDI
ETPKQAAVLGAGIMGGGIAYQSAW
KGVPVIMKDINDKSLNLGMTEAAKLLNKQLERGK
IDGLKLAGVISTIHPTLDYAGFDR
VDVVVEAVVENPKVKKAVLAETE QKVRPETVLAS
NTSTIPIGELASALERPENFCGMH
FFNPVHRMPLVEIIRGEKSSDETI AKVVAWASKM
GKTPIVVNNCPGFFVNRVLPYFA
GFSQLLRD GADFRKVDKVM EKQFGWPMGPAYLLD
VVGIDTAHHAQAVMAAGFPQRMQK
EYRDAIDALFDASRFGQKNGLGFWR YKEDSKGKP
KKEEDA AVDDLASVSQTKRDFSD
DEIIARMMIPMINEVVRCL EEGIIASPAEADMAL
VYGLGFPPFHGGAFRWLDTQGS AK
YLDMAQQYQHLGPLYEVPEGLRDKTRHNEPY YPP

```

misc-feature	222055..222570	/gene="STY3577" /note="Pfam match to entry PF00378 ECH, Enoyl-CoA hydratase/isomerase family, score 300.70, E-value 1.7e-86"
misc-feature	222319..222381	/gene="STY3577" /note="PS00166 Enoyl-CoA hydratase/isomerase signature"
misc-feature	222325..222357	/gene="STY3577" /note="PS00013 Prokaryotic membrane lipoprotein lipid attachment site"
misc-feature	222949..223779	/gene="STY3577" /note="Pfam match to entry PF00725 3HCDH, 3-hydroxyacyl-CoA dehydrogenase, score 579.90, E-value 1.6e-170"
misc-feature	223480..223554	/gene="STY3577" /note="PS00067 3-hydroxyacyl-CoA dehydrogenase signature"
gene	224203..225366	/gene="STY3578" /note="synonym: fadA"
CDS	224203..225366	/gene="STY3578" /note="Fasta hit to ATOB-ECOLI (394 aa), 44% identity in 401 aa overlap Fasta hit to YQEF-ECOLI (393 aa), 41% identity in 401 aa overlap Fasta hit to P77525 (401 aa), 46% identity in 404 aa overlap Fasta hit to YFCY-ECOLI (436 aa), 35% identity in 428 aa overlap Orthologue of E. coli fadA (THIK-ECOLI); Fasta hit to THIK-ECOLI (387 aa), 95% identity in 387 aa overlap" /codon-start=1 /transl-table=11 /product="small (beta) subunit of the fatty acid-oxidizing multienzyme complex" /protein-id="CAD07911.1" /db-xref="GI:16504456" /db-xref="GOA:Q9L6L6" /db-xref="SWISS-PROT:Q9L6L6" /translation="MEQVVIVDAIRTPMGRSKGG AFRNVRAEDLSAHLMRSLLARNPS LTAATLDDIYWGCVQQTLEQGFNIARNAALLAEI PHSVPAVTVNRLCGSSMQALHDAA RMIMTGDAQVCLVGGVEHMGHVPMSHGVD FHPGL SRNVAKAAGMMGLTAEMLSRLHGI SREMQDQFAARSHARAWAATQSGAFKTEI IPTGG HDADGVLKQFN YDEVIRPETTVEA LSTLRPAFD PVSGTVTAGTSSALS DGAAAMLVMS ESRARELGLKPRARIRSM AVVGCD PSIMGYGPVPASKLALKKAGLSASDIDVFEMNEA FAAQILPCIKDLGLMEQIDEKINL NGGAIALGHPLGCSGARISTTLINLMERKDAQFG LATMCIGLGQGIATVFERV"
misc-feature	224203..225363	/gene="STY3578" /note="Pfam match to entry PF00108 thiolase, Thiolase, score 770.20, E-value 8.1e-228"
misc-feature	224461..224517	/gene="STY3578" /note="PS00098 Thiolases acyl-enzyme intermediate signature"
misc-feature	225199..225249	/gene="STY3578" /note="PS00737 Thiolases signature 2"
misc-feature	225304..225345	/gene="STY3578" /note="PS00099 Thiolases active site"
gene	complement(225563..2273 86)	/gene="STY3579"
CDS	complement(225563..2273	/gene="STY3579"

```

/note="Similar to Campylobacter
jejuni arylsulfatase atsa
TR:Q46098 (EMBL:U38280) (620 aa)
fasta scores: E(): 0; 59.4% id in
613 aa"
/codon-start=1
/transl-table=11
/product="possible transferase"
/protein-id="CAD07912.1"
/db-xref="GI:16504457"
/db-xref="GOA:Q8Z3C5"
/db-xref="SPTREMBL:Q8Z3C5"
/translation="MKFKYALTSALSVAILSSV
PSTAFaIGGASGAKVDYQVQGKIG
EVVMNPYDIAPLTAVIRNGGYQLRDVHVRIVPKE
NGQEIAYKVNNKYLLTYGGIPVFG
LYPDYVNTVEVEYTRIQGSKTENIKESYKMYAPP
AYSESAGTKKEEQSALFTIDVKKVS
PEFKDRLLYLLNNTKDKSGNGTRTVWNNPTGGALE
WNFTTANAIIDTSGDIRWFMNPSS
IYDLKSIYRAGVMMGFKQNQDGALSWGYGQRYVK
YDIMGREIFNRRLPDNYNDFSHSM
DNAPNGHYFLRVASSNYKRPDGKNVRTVRDVIAE
VDQNGVVVDEWRLFDILDPIYRDVI
MKTLDQGA VCLNIDASQSGHTLSEEDLAALDSSD
KFGDIVGSGAGR NWAHVNSVDYDS
EDDSIIISFRHQSAIIKIGRDKKVKWILGTPAGW
KAPFNAAILTPVDSKGQKISCQES
GCEGDFDWTWTQHTAFKIDSKSKGDILYLSAFDN
GDGRGLEQPAMQSMKYSRSVIYKI
DQKNKTVQQIWIQYGKERGNEWFSPVTSITEYQTD
KNSVFVYSATAGGEFDLSVGAFTS
LPNPYLEEFWRWGEKEPAVEMQIHGARGYQAMPFS
LTKALTE"

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gene complement (227640..2283 41)

/gene="STY3580"

CDS complement (227640..2283 41)

/note="synonym: ubiB"
/gene="STY3580"

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/note="Orthologue of E. coli ubiB
(UBIB-ECOLI); Fasta hit to
UBIB-ECOLI (232 aa), 91% identity
in 232 aa overlap"
/codon-start=1
/transl-table=11
/product="flavin reductase"
/protein-id="CAD07913.1"
/db-xref="GI:16504458"
/db-xref="GOA:Q8Z3C4"
/db-xref="SPTREMBL:Q8Z3C4"
/translation="MTTSLCKVTSVEAITDTVYR
VRLVPDAAFSFRAGQYLMVVMDE
DKRPFMSMASTPDEKGFIELHIGASELNLYAMAVM
DRILKDREIVVDIPHGDWLRDDE
ERPLILIAGGTGFSYARSILLTALARNPARDVTI
YWGGREEKHLYDLSELEALSVNHP
NLRIEPPVVEQPEEGWRGRTGTVLTA VLQDYGTLA
GHDIYIAGR FEMAKIARDLFCHE
NAREDR LFGDAFAFI"

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misc-feature complement (227703..2280 35)

/gene="STY3580"

/note="Pfam match to entry PF00175
oxidored-fad, Oxidoreductase
FAD/NAD-binding domain, score
130.20, E-value 3.9e-35"

gene complement (228427..2299 05)

/gene="STY3581"

CDS complement (228427..2299 05)

/note="synonym: yigC"
/gene="STY3581"

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/note="Orthologue of E. coli yigC
(YIGC-ECOLI); Fasta hit to
YIGC-ECOLI (497 aa), 96% identity
in 491 aa overlap"
/codon-start=1

```

		<pre> /product="conserved hypothetical protein" /protein-id="CAD07914.1" /db-xref="GI:16504459" /db-xref="SPTREMBL:Q8Z3C3" /translation="MDAMKYHDLRDFLTLLLEQQG ELKRITLPVDPHLEITEIADRTL AGGPALLFENPKGYAMPVLCNLFGTPKRVAMGMG QDDVSALREV GKLLAFLKEPEPPK GFRDLFDKLPQFKQVLNMPTKRLRGAPCQQKIAS GDDVDLTRLPVMTCPWPDDAAPLIT WGLTVTRGPHKERQNLGIYRQQLIGKNKLIMRWL SHRGGALDFQEWLAARPGERFPVS VALGADPATILGAVTPVPDTLSEYAFAGLLRGTK TEVVKCLSNDLEVPASAEIILEGY IEPGEMAPEGPYGDHTGYYNEVDNFPVFTVTHIT QREDAIYHSTYTGRPPDEPAVLGV ALNEVFVPILQKQFPEIVDFYLPPEGCSYRLAVV TMKKQYAGHAKRVMMGVWSFLRQF MYTKFVIVCDDVDNARDWNDVIWAITTRMDPARD TVLVENTPIDYLDFAFPVSGLGSK MGLDATNKWPGETQREWGRPIVKDPEVTARIDAI WDELAIFK" </pre>
misc-feature	complement (228595..229869)	<pre> /gene="STY3581" /note="Pfam match to entry PF01977 UPF0096, Protein of unknown function UPF0096, score 829.90, E-value 8.6e-246" </pre>
gene	230091..230579	<pre> /gene="STY3582" </pre>
CDS	230091..230579	<pre> /note="synonym: rfaH" /gene="STY3582" /note="Orthologue of E. coli rfaH (RFAH-ECOLI); Fasta hit to RFAH-ECOLI (162 aa), 88% identity in 162 aa overlap" /codon-start=1 /transl-table=11 /product="transcriptional activator" /protein-id="CAD07915.1" /db-xref="GI:16504460" /db-xref="SPTREMBL:Q8Z3C2" /translation="MQSWYLLYCKRGQLQRAQEH LERQAVSCLTPMITLEKMRGKRT FVSEPLFPNYLFEVFDPEVIHTTTINATRGVSHF VRFGAHPAIVPSSVIHQLSIYKPE GVVDPETPYPGDSVIIITEGAFEGGLKAIFTEPDGE TRSMLLLNNLLNKEVKQSVKNTGFR KI" </pre>
gene	complement (230587..231369)	<pre> /gene="tatD" </pre>
CDS	complement (230587..231369)	<pre> /note="synonym: STY3583" /gene="tatD" /note="Similar to Escherichia coli deoxyribonuclease TatD SW:TATD-ECOLI () (264 aa) fasta scores: E(): 0, 81.9% id in 260 aa" /codon-start=1 /transl-table=11 /product="putative deoxyribonuclease" /protein-id="CAD07916.1" /db-xref="GI:16504461" /db-xref="SPTREMBL:Q8Z3C1" /translation="MFDIGVNLTSQFAKDRDDV VARAFAAGVKGMLLTGTNIHESQQ ALKLARRYPHCWSTAGVHPHDSSQWSSASEDAII ALANQPEVVAIGECGLDFNRNFST POEQERAFAQALQIAAELQMPIFMHCRDAHERFL ALLDPWLDSLPGAILHCFTGSRQQ MQACVDRGLYIGITGWVCDERRGLELRELLPFIP AEKLLIETDAPYLLPRDLTPKPTS RRNEPAYLPHILERIALWRGEDPQWLAAMTDANA </pre>

misc-feature complement (230599..2313 /gene="tatD"
54)
/note="Pfam match to entry PF01026
UPF0006, Metalloenzyme of unknown
function UPF0006, score 375.20,
E-value 6.5e-109"

misc-feature complement (230755..2308 /gene="tatD"
05)
/note="PS01091 Uncharacterized
protein family UPF0006 signature
3"

misc-feature complement (230971..2310 /gene="tatD"
03)
/note="PS01090 Uncharacterized
protein family UPF0006 signature
2"

gene complement (231411..2321 /gene="tatC"
90)
/note="synonym: STY3584"

CDS complement (231411..2321 /gene="tatC"
90)
/note="Similar to Escherichia coli
sec-independent protein
translocase protein TatC
SW:TATC-ECOLI () (258 aa) fasta
scores: E(): 0, 90.0% id in 259
aa"
/codon-start=1
/transl-table=11
/product="sec-independent protein
translocase protein"
/protein-id="CAD07917.1"
/db-xref="GI:16504462"
/db-xref="SPTREMBL:Q9L6M3"
/translation="MAVEDTQPLITHLIELRKRL
LNCIVAVLLIFLALIYFANDIYHL
VAAPLIKQMPQGATMIATDVASPFFTP IKLTFMV
SLILSAPVILYQVWAFIAPALYKH
ERRLVVPLLVS SLLFYIGMAFAYFVVFPLAFGF
LHTAPEGVQVSTDIASYLSFVMA
LFMAFGVAFVFPVAIVLLCWMGITTTPEDLRKKRP
YILVGAFIVGMLLTPPDVFSQTLL
AIPMYCLFEIGVFCSR FYVVKRRTRDEDNEAETE
KAEHTED"

misc-feature complement (231528..2321 /gene="tatC"
39)
/note="Pfam match to entry PF00902
UPF0032, MttB family UPF0032,
score 351.60, E-value 8.6e-102"

misc-feature complement (231672..2317 /gene="tatC"
31)
/note="PS01218 Uncharacterized
protein family UPF0032 signature"

gene complement (232193..2327 /gene="tatB"
41)
/note="synonym: STY3585"

CDS complement (232193..2327 /gene="tatB"
41)
/note="Similar to Escherichia coli
sec-independent protein
translocase protein TatB or MttA2
TR:O69415 (EMBL:AJ005830) (171 aa)
fasta scores: E(): 0, 81.9% id in
182 aa Orthologue of E. coli
O87926; Fasta hit to O87926 (145
aa), 80% identity in 156 aa
overlap"
/codon-start=1
/transl-table=11
/product="sec-independent protein
translocase protein"
/protein-id="CAD07918.1"
/db-xref="GI:16504463"
/db-xref="GOA:Q8Z3C0"
/db-xref="SWISS-PROT:Q8Z3C0"

		GPQRLPVAVKTVAGWIRALRSLAT TVQNELTQELKLQEFQDSLKKVEKASLENLTPEL KASMDLQRQAESMKRTYSANDPE QASDEAHTIHNPPVVKGNETQHEGVTPAAAETQAS APEQKPEPVKANVPESTETASVAA IDAEKKSAAPVVESSPSSSDKP"
gene	complement (232745..23299)	/gene="tataA"
CDS	complement (232745..23299)	/note="synonym: STY3586" /gene="tataA"
		/note="Similar to Escherichia coli sec-independent protein translocase TataA or MttA1 TR:065938 (EMBL:AJ005830) (103 aa) fasta scores: E(): 1.2e-23, 84.3% id in 89 aa Fasta hit to YBEC-ECOLI (67 aa), 60% identity in 68 aa overlap Orthologue of E. coli 065938; Fasta hit to 065938 (103 aa), 84% identity in 89 aa overlap" /codon-start=1 /transl-table=11 /product="sec-independent protein translocase protein" /protein-id="CAD07919.1" /db-xref="GI:16504464" /db-xref="GOA:P57045" /db-xref="SWISS-PROT:P57045" /translation="MGGISIWQLLIVAVIVVLLF GTKKLGSIGSDLGASIKGFKKAMS DDDAKQDKTSQDADFTAKSIADKQGEAKKEDAKS QDKEQV"
gene	complement (233205..234845)	/gene="aarF"
CDS	complement (233205..234845)	/note="synonym: STY3587" /gene="aarF"
		/note="Similar to Escherichia coli ubiquinone biosynthesis protein AarF aarF SW:AARF-ECOLI (P27854; P27855; P76764; P27853) (546 aa) fasta scores: E(): 0, 94.3% id in 546 aa" /codon-start=1 /transl-table=11 /product="ubiquinone biosynthesis protein" /protein-id="CAD07920.1" /db-xref="GI:16504465" /db-xref="GOA:Q9L6M4" /db-xref="SWISS-PROT:Q9L6M4" /translation="MTPGEVRRLYFIIRTFLSYG LDELIPRMRLTLPLRLWRYSLFWM PNRHKDKLLGERLRLALQELGPVWIKFGQMLSTR RDLFPPQIADQLALLQDKVAPFDG RLAKAQIEEAMGGLPVEAWFDDFDIQPLASASIA QVHTARLKSNGKEVVIKVIKIRPDIL PVIQADLKLIIYRLARWVPRLLPDGRRLRPTEVVR EYEKTLIDELNLLRESANAIQLRR NFENSPMLYIPEVYSDYCSQNMVMERIYGIPVS DVAALEKNGTNMKLLAERGKVVFF TQVFRDSFFHADMHGPNIFVSHEHPENPQYIGID CGIVGSLNKEDKRYLAENFIAFFN RDYRKVAELHVD SGWVPPDTNVEDFEFAIRTVCE PIFEKPLAEISFGHVLLNLFNTAR RFNMEVQPQLVLLQKTLLEYEGVGRQLYPQLDLW KTAKPFLESWIKDQVGIPALTRAL KEKAPFWVEKMPEIPELVYDSLROGKYLQHSVDK IARELQVNHVRQSQSRYLLGIGAT LLLSGSFLLVNRPEWGLMPGWL MVGGVVVWLVGW RKTR"
gene	complement (234842..235447)	/gene="STY3588"

CDS complement (234842..2354 /gene="STY3588"
47)
/note="Orthologue of E. coli yigP (YIGP-ECOLI); Fasta hit to YIGP-ECOLI (201 aa), 87% identity in 201 aa overlap"
/codon-start=1
/transl-table=11
/product="conserved hypothetical protein"
/protein-id="CAD07921.1"
/db-xref="GI:16504466"
/db-xref="SPTREMBL:Q8Z3B9"
/translation="MPFKPLVTAGIEGLLNTFLY RSPALKSARTRLQGVLCVKLKGF STPLVLVFSERQVDVLGAWEGEADCTVITQASVL PKLRDRQQQLAALIRSGELEVQGDI QVVQNFVALADLAEFDPALLAPYTGDI AAESIG KVVRRGAKFLRHGFQRQRYAAEA ITEEWRMAPGPLEVAWF AEETA AVERAVDSL TTR LEKLGAK"

gene complement (235457..2362 /gene="ubiE"
12)

CDS complement (235457..2362 /gene="ubiE"
12)
/note="synonym: STY3589"
/EC-number="2.1.1.-"
/note="Similar to Escherichia coli ubiquinone/menaquinone biosynthesis methyltransferase UbiE ubiE SW:UBIE-ECOLI (P27851) (251 aa) fasta scores: E(): 0, 95.6% id in 251 aa"
/codon-start=1
/transl-table=11
/product="ubiquinone/menaquinone biosynthesis methyltransferase UbiE"
/protein-id="CAD07922.1"
/db-xref="GI:16504467"
/db-xref="GOA:Q9L6M6"
/db-xref="SWISS-PROT:Q9L6M6"
/translation="MVEDSQETTHFGFQTVAKEQ KADMVAHV FHSVASKYDVMNDLMS FGIHRLWKRFTIDCSGVRRGQTVLDLAGGTGDLT AKFSRMVGETGKVILADINDSMLK MGREKLRNIGVIGNVEYVQANAEALPFPDNTFDC ITISFGLRNVTEKEKALRSMFRVL KPGGRLLVLEFSKPIIEPLSKAYDAYSFHILPRI GSMVANDADSYRYLAESIRMHPDQ DTLKAMMQDAGFESVDYYNLTAGVVALHRGYKF"

misc-feature complement (235463..2361 /gene="ubiE"
73)
/note="Pfam match to entry PF01209 Ubie-methyltran, ubiE/COQ5 methyltransferase family, score 588.50, E-value 4.1e-173"

misc-feature complement (236060..2361 /gene="ubiE"
07)
/note="PS01183 ubiE/COQ5 methyltransferase family signature 1"

gene complement (236308..2377 /gene="STY3590"
38)

CDS complement (236308..2377 /gene="STY3590"
38)
/note="synonym: yigN"
/note="Orthologue of E. coli yigN (YIGN-ECOLI); Fasta hit to YIGN-ECOLI (475 aa), 87% identity in 475 aa overlap. Contains a possible N-terminal signal sequence and a possible coiled-coil region between residues 65..124"

		/transl-table=11 /product="putative membrane protein" /protein-id="CAD07923.1" /db-xref="GI:16504468" /db-xref="GOA:Q9L6M7" /db-xref="SWISS-PROT:Q9L6M7" /translation="MDITLMISAVVALAAGAVIG WLATKAHADQIRADLIEERRELDI ELSAARQQLAQEAHWRSECELLNNELRSLHSINT SLEADLREVTTTRLEATQQHAEDKI RQMINSEQRLSEQFENLANRIFEHSNRRVDEQNR QSLNSLLTPLREQLDGFRQVQES FGKEAQERHTLAHEIRNLQQLNAQMAQEAINLTR ALKGDNKAQGNWGEVVLARVLEAS GLREGYEYETQVSIENDARSRMQPDVIVRLPQ GK DVVIDAKMTLVAYERYFNAEDDYT REAALQEHIASVRNHIRLLGRKDYQQLPGLRSLD YVLMFIPVEPAFLALDKQPELIT EALKNNIMLVSPPTLLVALRTIANLWRYEHQSRN AQHIADRASKLYDKMRLFVDDMSA IGQSLDKAQDNRYRQAMKKLASGRGNVLAQAEAFR GLGVEIKREINPDLAEQAVTQDEE YRLRSIPEGRQDEHYPNDERVKQQLS" /gene="udp"
gene	complement(237878..238639)	
CDS	complement(237878..238639)	/note="synonym: STY3591" /gene="udp" /EC-number="2.4.2.3" /note="Similar to Escherichia coli uridine phosphorylase UDP SW:UDP-ECOLI (P12758) (252 aa) fasta scores: E(): 0, 97.2% id in 252 aa and to Salmonella typhimurium uridine phosphorylase SW:UDP-SALTY () (252 aa) fasta scores: E(): 0, 99.2% id in 252 aa" /codon-start=1 /transl-table=11 /product="uridine phosphorylase" /protein-id="CAD07924.1" /db-xref="GI:16504469" /db-xref="GOA:O33808" /db-xref="SWISS-PROT:O33808" /translation="MSKSDVFHGLGLTKNDLQGAQ LAIVPGDPERVEKIAALMDKPVKL ASHREFTSWRAELDGKAVIVCSTGIGGPSTSIIV EELAQLGIRTFRLRIGTTGAIQPHI NVGDVLVTTASVRLDGASLHFAPMEFPAVADFAC TTALVEAAKSIGATTHVGV TASSD TFYPGQERYDITYSGRVVRRFKGSMEEWQAMGVMN YEMESATLLTMCASQGLRAGMVAG VIVNRTQQEIPNAETMKQTESHAVKIVVEAARRL L" /gene="udp"
misc-feature	complement(237893..238582)	/note="Pfam match to entry PF01048 PNP-UDP-1, Phosphorylase family, score 375.00, E-value 7.6e-109" /gene="udp"
misc-feature	complement(238397..238444)	/note="PS01232 Purine and other phosphorylases family 1 signature" /gene="STY3592"
gene	238898..239710	/note="synonym: ysgA" /gene="STY3592"
CDS	238898..239710	/note="Similar to Escherichia coli putative carboxymethylenebutenolidase YsgA SW:DLHH-ECOLI (P56262) (258 aa) fasta scores: E(): 0, 90.6% id in 255 aa Orthologue of E. coli DLHH-ECOLI; Fasta hit to

		in 255 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="putative hydrolase"
		/protein-id="CAD07925.1"
		/db-xref="GI:16504470"
		/db-xref="GOA:Q8Z3B8"
		/db-xref="SWISS-PROT:Q8Z3B8"
		/translation="MTTTHPSGFAPAASPLAPTM
		IHTPDGAISAGITSIPSQGDMPA
		YYARPKASDGLPVVIVVQEIFGVHEHIRDICRR
		LALEGYLAIAPELYFREGDPNDF
		DIPTLLSGLVAKVPDSQVLADLDHVASWASRNGG
		DAHRLMITGFCWGGGRITWLYAAHN
		PQLKAAVAWYGKLVGDTSLNSPKHPVDIATDLNA
		PVLGLYSGQDTSIPQESVETMRQA
		LRAANAKAEIVVYPDAGHAFNADYRPGYHEASAK
		DGWQRMLEWFAQYGGKKG"
misc-feature	239021..239695	/gene="STY3592"
		/note="Pfam match to entry PF01738
		DLH, Dienelactone hydrolase
		family, score 352.40, E-value
		4.7e-102"
gene	complement(239786..2411	/gene="STY3593"
	32)	
CDS	complement(239786..2411	/gene="STY3593"
	32)	
		/note="Fasta hit to YDEM-ECOLI
		(385 aa), 42% identity in 390 aa
		overlap Orthologue of E. coli aslB
		(ASLB-ECOLI); Fasta hit to
		ASLB-ECOLI (411 aa), 48% identity
		in 393 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="putative regulatory
		protein"
		/protein-id="CAD07926.1"
		/db-xref="GI:16504471"
		/db-xref="SPTREMBL:Q8Z3B7"
		/translation="MSHGAGEPYFLTEMSDMAVA
		GCHVMAKPGGAICNIDCTYCFYLE
		KEALYPERNKNWRMSDETLEQFIRQHIAAQSGDR
		IDFAWQCCEPTMMGLPFFRRVVAL
		CEKYGDGRKITHALQTNGLVNDWARFFAEQHF
		LIGLSIDGPASLHNHYRLNRAGKG
		THEQVVAAMARLKAHHVDFTLTIVVGKHNVGHAA
		DVYEFLLAAGSRFIQFIPLVERMS
		TDNSSVLNLVMPGESAAKLAPWTVPSWQYGEFLN
		QIFDIWVRDVRVYVQMFDDVALA
		AWTAQQPVLCVHSETCGHAFALSNGLDLYNCDHF
		VYPEHLLGNIHQHSIKTLNNSERA
		IAFGEAKRETLTADCRRCDYRFACHGGCPKHRFA
		VSPSGHPAHNYLCTGYKHFFQHVT
		PYMNWVRELLAQGYPMASIMRWLAQDARKDTGAV
		SRNHLCPGSGGKKYKNAVVKHS"
misc-feature	complement(240203..2408	/gene="STY3593"
	95)	
		/note="Pfam match to entry PF01444
		MoaA-NifB-PqqE, moaA / nifB / pqqE
		family, score -26.10, E-value
		0.0081"
gene	complement(241467..2437	/gene="STY3594"
	31)	
		/note="synonym: metE"
CDS	complement(241467..2437	/gene="STY3594"
	31)	
		/note="Orthologue of E. coli metE
		(METE-ECOLI); Fasta hit to
		METE-ECOLI (752 aa), 94% identity
		in 751 aa overlap"
		/codon-start=1
		/transl-table=11
		/product="5-methyltetrahydropteroyl
		lriglutamate- homocysteine

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/protein-id="CAD07927.1"
/db-xref="GI:16504472"
/db-xref="GOA:Q8Z3B6"
/db-xref="SWISS-PROT:Q8Z3B6"
/translation="MTILTHTLGFPRVGLRRELK
KAQESYWAGNTTREALLAVGRELR
ARHWEQQKQAGIDLLPVGDFAWYDHVLTSTLLLG
NVPARHQNNDSVDIDTLFRIGRG
RAPTGEPAAAAEMTKWFNTNYHYIVPEFSKGQQF
RLTWTQLLEEVDALALGHKIKPV
LLGPVITYLWLKGKVGEPFDRLTLKDLIPVYQHV
LAELAKRGVEWVQIDEPALVLELP
QAWLDAFKPAYDALAGQVKLLLTTFEGVTPNLD
TIIVLPVQGLHVDLIHGKDDVVEL
HQRLPVDWLLSAGLINGRNVWRADLTEKYAQINA
IVGKRALWVASSCSLLHSPIDLSV
ETRLDTEVKSWFAFALQKCGELALLRDALNSGET
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EKRLAAITAQDSQRENPEVRAEAQRARFKLPW
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AERNDMVEYFGEHLDGFVFTQNGW
VQSYGSRVCVKPPVIGDISRPAPITVEWAKYAQS
LTDKPVKGMLTGPVTILCWSFPRE
DVTRETIAKQIALALRDEVADLEAAGIGIIQIDE
PALREGLPLRRSDWDAYLEWGVFA
FRINAAVAKDETQIHTHMCYCEFNDIMDSIAALD
ADVITIETSRSDMELLESFEAFDY
PNEIGPGVYDIHSPNVPSVEWIEALLKKAQRIP
AQRLWVNPDCGLKTRGWPETRAAL
ANMVKAAHNLROAK"
/misc-feature complement (241485..2424 /gene="STY3594"
56)
gene 243980..244933 /note="Pfam match to entry PF01717
Methionine-synt, Methionine
synthase, vitamin-B12 independent,
score 775.00, E-value 3.1e-229"
CDS 243980..244933 /gene="STY3595"
/note="synonym: metR"
/gene="STY3595"
/note="Orthologue of E. coli metR
(METR-ECOLI); Fasta hit to
METR-ECOLI (317 aa), 92% identity
in 317 aa overlap"
/codon-start=1
/transl-table=11
/product="trans-activator of metE
and meth"
/protein-id="CAD07928.1"
/db-xref="GI:16504473"
/db-xref="GOA:P05984"
/db-xref="SWISS-PROT:P05984"
/translation="MIEIKHLKTLQALRNSGSLA
AAAVLHQTSALSHQFSDLEQRL
GFRLFVRKSQPLRFTPQGEVLLQLANQVLPQISR
ALQACNEPQQTRLRIAIECHSCIQ
WLTPALENFRASWPQVEMDFTSGVTFDPQPALQQ
GELDLVMTSDILPRSGLHYSMPFD
FEVRLVLAPDHPLASKTQITPEDLASETLLIYPV
QRSRLDVWRHFLQAGISPLLKSV
DNTLLLIQMVAARMGIAALPHWVVESVERQGLVV
TKTLGDGLWSRLYAAVRDGDQROA
VTEAFIRSTRDHACDHLFPVRSAPERPIFDAPTAK
PGSQPRL"
/misc-feature 243989..244408 /gene="STY3595"
/note="Pfam match to entry PF00126
HTH-1, Bacterial regulatory
helix-turn-helix protein, lysR
family, score 156.20, E-value
5.7e-43"
/misc-feature 244031..244123 /gene="STY3595"
/note="PS00044 Bacterial
regulatory proteins, lysR family
signature"
gene complement (244821..2457 /gene="STY3596"

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CDS	complement (244821..245720)	/note="synonym: yigM" /gene="STY3596" /note="Orthologue of E. coli yigM (YIGM-ECOLI); Fasta hit to YIGM-ECOLI (288 aa), 89% identity in 291 aa overlap. Contains multiple possible membrane spanning hydrophobic domains. Note the large overlap with the downstream CDS." /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07929.1" /db-xref="GI:16504474" /db-xref="GOA:Q9L6N3" /db-xref="SWISS-PROT:Q9L6N3" /translation="MALLIITILWAFSFSLFGE YLAGHVDSYFAVLIRVGLAALVFL PFLRTRGHNLKTISLYMLVGAMQLGIMYMLSFHA YLYLTVSELLLFVLTPLYITLIY DVMSQRRLRWGYAFSALLAVIGAGIIRYDRVTDH FWVGLLLVQLSNISFAIGMVGKYR LMETRPMPQHNAFAWFYLGAFVAAVAWSLLGNA QKLPEITLQWSILVFLGVVASGIG YFMWNYGATQVDAGTLGIMNNMHVPAGLLVNLA WHQQPHWPSFITGAAVILASLWVH RKWVAPRSAQTADDRRRDPASSE" /gene="STY3596"
misc-feature	complement (244890..245276)	/note="Pfam match to entry PF00892 DUF6, Integral membrane protein DUF6, score 37.10, E-value 4e-07" /gene="yigL"
gene	complement (245801..246601)	/note="synonym: STY3597" /gene="yigL"
CDS	complement (245801..246601)	/note="Similar to Salmonella typhimurium LT2 YigL protein yigL TR:AAF33430 (EMBL:UNKNOWN ACCESSION) (266 aa) fasta scores: E(): 0, 100.0% id in 266 aa, and to Escherichia coli hypothetical 29.8 kDa protein in pldb-metr intergenic region. hypothetical 29.8 kDa protein in pldb-metr intergenic region SW:YIGL-ECOLI (P27848) (265 aa) fasta scores: E(): 0, 84.5% id in 265 aa Fasta hit to COF-ECOLI (272 aa), 39% identity in 260 aa overlap Orthologue of E. coli yigL (YIGL-ECOLI); Fasta hit to YIGL-ECOLI (265 aa), 85% identity in 265 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07930.1" /db-xref="GI:16504475" /db-xref="GOA:Q9L6N4" /db-xref="SPTREMBL:Q9L6N4" /translation="MYQVVASDLTGTLSPDHTL SPYAKETLKLITARGIHFVFATGR HHVDVGGQIRDNLEIKSYMITSNGARVHDTGDNLV FTHNLDSDIASDLFGVVNANPDIV TNVYRDDDEWFMMNRHRPDEMRFKFAVFNYSLFEP ALLEPEGVSKVFFTSDTHEKLLPL EQAINARWGDRVNVSFSTLTCLEVMAGGVSKGHA LEAVAQAMGYSLKECIAFGDGMND AEMLTMAGKGCIMGNAHQRLKDLYPELEVIGINA

misc-feature	complement(245849..2465 92)	/gene="yigL" /note="Pfam match to entry PF00592 DUF3, Cof family DUF3, score 373.60, E-value 2e-108"
misc-feature	complement(245900..2459 68)	/gene="yigL" /note="PS01229 Hypothetical cof family signature 2"
misc-feature	complement(246557..2465 92)	/gene="yigL" /note="PS01228 Hypothetical cof family signature 1"
gene	complement(246617..2476 33)	/gene="STY3598" /note="synonym: pldB"
CDS	complement(246617..2476 33)	/gene="STY3598" /note="Orthologue of E. coli pldB (PLDB-ECOLI); Fasta hit to PLDB-ECOLI (340 aa), 82% identity in 336 aa overlap" /codon-start=1 /transl-table=11 /product="lysophospholipase L2" /protein-id="CAD07931.1" /db-xref="GI:16504476" /db-xref="GOA:Q8Z3B5" /db-xref="SPTREMBL:Q8Z3B5" /translation="MFQQQNDWETRENAFAAFAM GPLTDFWRQREEAEFIGVDNIPVR FVRFRNDSNDRTIVICPGRIESYVKYAEAYDLF HLGFDIFIIDHRGQGRSGRMLSDP HRGHVDHFNDYVEDLAAFWQOEIEPGSWRKRYIL AHSMGGAIATLFLQRHRVRCDAIA LTAPMFGIVIRLPSFMVRHILDWAEHQRIREDY AIGTGQWRALPFGMNALTHSRQRY QRNLRFYADEPQLRVGGPTWHWVREGILAGEQVL AGASDDTPTLLIQAEERVV DNR THDRFCEIRAAAGYPCGEGKPLVIKGAYHEILFE KDAMRSVALNAIVEFFNKP NLSSG NRFA"
misc-feature	complement(246665..2473 90)	/gene="STY3598" /note="Pfam match to entry PF00561 abhydrolase, alpha/beta hydrolase fold, score 111.50, E-value 1.6e-29"
gene	247744..248364	/gene="rhtB" /note="synonym: STY3599"
CDS	247744..248364	/gene="rhtB" /note="Similar to Escherichia coli homoserine/homoserine lactone efflux protein RhtB SW:RHTB-ECOLI (P27847) (206 aa) fasta scores: E(): 0, 89.3% id in 206 aa" /codon-start=1 /transl-table=11 /product="homoserine/homoserine lactone efflux protein" /protein-id="CAD07932.1" /db-xref="GI:16504477" /db-xref="GOA:Q8Z3B4" /db-xref="SWISS-PROT:Q8Z3B4" /translation="MTFEWWFAYLLTSTLLSLSP GSGAINTMTTSINHG YRGAAASIA GLQTGLGIHIVLVGVGLGTLFSRSLIAFEILKWA GAAYLIWLGIQQWRAAG AIDLHTL AQTQSRGR LFKRAIFVNL TNPKSIVFLAALFPQF IMPQQPQLAQYLILGVTTIVVDMI VMTGYATLAQRIAAWIKGPKQMKALNKAFGSLFM LVGALLASARHA"
misc-feature	247948..248262	/gene="rhtB" /note="Pfam match to entry PF01810 LysE, LysE type translocator, score 127.60, E-value 2.2e-34"

24) complement (248404..2490) /note="synonym: STY3600"
/gene="rhtC"

24) /note="Similar to Escherichia coli
threonine efflux protein rhtC
SW:RHTC-ECOLI (P27846) (206 aa)
fasta scores: E(): 0, 91.3% id in
206 aa"
/codon-start=1
/transl-table=11
/product="threonine efflux
protein"
/protein-id="CAD07933.1"
/db-xref="GI:16504478"
/db-xref="GOA:Q8Z3B3"
/db-xref="SWISS-PROT:Q8Z3B3"
/translation="MLMLFFTVMVHIVALMSPG
PDDFFVSQTAVSRSRKEAMMGVLG
ITCGVMVWAGVALLGLHLIEKMAWLHTIIMVGG
GLYLWCWGYQMLRGALKKKQDAAAS
SPHIELAQSGRSFLKGLLTNLSNPKAIIYFGSVF
SLFVGDNVGAARWGIFALITLET
LAWFTTVASLFAFPKMRRGYQRLAKWIDGFAGAL
FAGFGIHLIISR"
/gene="rhtC"

misc-feature complement (248497..2488) /note="Pfam match to entry PF01810
LysE, LysE type translocator,
score 145.70, E-value 8e-40"

gene complement (249088..2509) /gene="recQ"

17) /note="synonym: STY3601"
/gene="recQ"

CDS complement (249088..2509) /EC-number="3.6.1.-"
/note="Similar to Escherichia coli
ATP-dependent DNA helicase RecQ
SW:RECQ-ECOLI (P15043; P76762)
(607 aa) fasta scores: E(): 0,
94.6% id in 608 aa"
/codon-start=1
/transl-table=11
/product="ATP-dependent DNA
helicase"
/protein-id="CAD07934.1"
/db-xref="GI:16504479"
/db-xref="GOA:Q8Z3B2"
/db-xref="SPTREMBL:Q8Z3B2"
/translation="MAQAEVLNLESGAKQVLQET
FGYQQFRPGQEAIIDTALSGRDCL
VVMPTGGGKSLCYQIPALLLDGLTVVVSPLISLM
KDQVDQLLANGVAAACLNSTQSRE
QQLEV MAGCRTGQIRLLYIAPERLMLDNFLDHLA
HWNPVLLAVDEAHCISQWGHDFRP
EYAALGQLRQRFALPFMAL TATADD TTRQDIIR
LLGLNDPLIQISSFDRPNIRYMLM
EKFKPLDQLMRYVQEQRGKSGIYCNSRAKVEDT
AARLQSRGISAAAYHAGLENAIRA
DVQEKFORDDLQIVVATVAFGMGINKPNVRFVHV
FDIPRNIESYYQETGRAGRDGLPA
EAMLFYDPADMAWLRRCLEEKPAQQLQDIERHKL
NAMGAFAEAQTCRRLVLLNYFGEG
RQEP CGNCDICLDPKQYDGLNDAQIALSTIGRV
NQRFGMGYVVEVIRGANNQIRDF
GHDKLKVYGMGREKSHEHWVSVIRQLIHLGLVMQ
NIAQHSALQLTDAARPVLRGDVPL
KLAVPRIVALKPRVMQKSFGGNYDRKLFALKRKL
RKAIAD EENIPPYVVFNDATLIEM
AEQMPVSASEMLSVNGVGMKRKLERFGKEFMALIR
AHVDGDDEE"
/gene="recQ"

misc-feature complement (249091..2493) /note="Pfam match to entry PF00570
HRDC, HRDC domain, score 130.40,

33)

misc-feature	complement (249925..250170)	/gene="recQ" /note="Pfam match to entry PF00271 helicase-C, Helicases conserved C-terminal domain, score 98.50, E-value 1.3e-25"
misc-feature	complement (250303..250872)	/gene="recQ" /note="Pfam match to entry PF00270 DEAD, DEAD/DEAH box helicase, score 121.60, E-value 1.5e-37"
gene	complement (251001..251870)	/gene="STY3602" /note="synonym: pldA"
CDS	complement (251001..251870)	/gene="STY3602" /note="Orthologue of E. coli pldA (PA1-ECOLI); Fasta hit to PA1-ECOLI (289 aa), 92% identity in 289 aa overlap" /codon-start=1 /transl-table=11 /product="detergent-resistant phospholipase A" /protein-id="CAD07935.1" /db-xref="GI:16504480" /db-xref="GOA:P37442" /db-xref="SWISS-PROT:P37442" /translation="MRAILRGLLPATLLPLAAYA QEATIKEVHDAPAVRGSIIANMLQ EHDNPFTLYPYDTNYLIYTNTSDLNKEAISTYNW SENARKDEVKFKQLSLAFPLWRGIL GPNSVLGASYTQKSWWQLSNSKESPFPRETNYEP QLFLGFATDYRFAGWTLRDVEMGY NHDSNGRSDPTSRSWNRLYTRLMAENGNWLVEVK PWYVIGSTDDNPDITKYMGGYYQLK IGYHLGEAVLSAKQYNWNTGYGGAEVGLSYPVT KHVRLYTQVYSGYGESLIDYNFNQ TRVGVGVMNDIF"
misc-feature	complement (251013..251807)	/gene="STY3602" /note="Pfam match to entry PF02253 PLA1, Phospholipase A1, score 584.10, E-value 9e-172"
gene	252035..252502	/gene="STY3603" /note="synonym: yigI"
CDS	252035..252502	/gene="STY3603" /note="Orthologue of E. coli yigI (YIGI-ECOLI); Fasta hit to YIGI-ECOLI (155 aa), 97% identity in 155 aa overlap" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07936.1" /db-xref="GI:16504481" /db-xref="GOA:P40725" /db-xref="SWISS-PROT:P40725" /translation="MSAVLTAEQALKLVGEMFVY HMPFNRLGLELERYEKAFAQLAF NNQPMVMVGNAQSIHGGVVIASALDVAAGLVCVG STLTRHETISEDELRLQRLSRMGTI DLRVDYLRPGRGNRFTATSSLLRAGNKVAVARVE LHNEDQLYIASATATYMGV"
gene	252546..253430	/gene="STY3604"
CDS	252546..253430	/gene="STY3604" /note="Similar to Escherichia coli chloramphenicol-sensitive protein RarD SW:RARD-ECOLI (P27844) (296 aa) fasta scores: E(): 0, 90.4% id in 293 aa and to Pseudomonas aeruginosa chloramphenicol-sensitive protein RarD SW:RARD-PSEAE (O68827) (299

		31.3% id in 291 aa. Contains multiple possible membrane spanning hydrophobic domains."
		/codon-start=1
		/transl-table=11
		/product="chloramphenicol-sensitive protein RarD"
		/protein-id="CAD07937.1"
		/db-xref="GI:16504482"
		/db-xref="GOA:Q8Z3B1"
		/db-xref="SWISS-PROT:Q8Z3B1"
		/translation="MDAKQTRQGVLLALAAAYFIW GIAPAYFKLIYYVPADEILTHRVI WSFFFMVALLSVSRQWRQVKRLKTPKKIFLLAL SAVLVGGNWLLFIWAVNNHHMLEA SLGYFINPLVNILLGMIFLGERFRMRQWLAVILA VCGVLVQLWTFGSLPIIALGLAFS FAFYGLVRKKIAVEAQTGMLVETLWLLPVAAIYL FSIADSATSHMGONALSLNLLLMA AGVVTTIPLLCTGAATRLRLSTLGFFQYIGPTL MFLLAFTFYGEVPGADKMVTFABI WVALAIFVMDAIYTQRKK"
misc-feature	252597..252980	/gene="STY3604" /note="Pfam match to entry PF00892 DUF6, Integral membrane protein DUF6, score 53.20, E-value 5.9e-12"
gene	253465..253923	/gene="STY3605"
CDS	253465..253923	/gene="STY3605" /note="Identical to Salmonella typhimurium LT2 YigG protein TR:Q9L6P2 (EMBL:AF233324) (152 aa) fasta scores: E(): 0, 100.0% id in 152 aa, and to Escherichia coli hypothetical 15.8 kDa protein in corA-rarD intergenic region YigG SW:YIGG-ECOLI (P27843) (138 aa) fasta scores: E(): 8.1e-27, 58.6% id in 128 aa" /codon-start=1 /transl-table=11 /product="conserved hypothetical protein" /protein-id="CAD07938.1" /db-xref="GI:16504483" /db-xref="SPTREMBL:Q9L6P2" /translation="MPPLVRGVAYCHANDVTQHM DVKLMLSVFIPSSERCVSRCRYLL SFALINIIIFSILVGVLVLYLSFVILAILFTILLHY LVINLNCQRFRD SGFEYIKFYVWG TLVIYIASFVIMVAEDFACDGF GMPLFLIWFAT FSLLLLAPPDSNSLNK"
gene	253939..254319	/gene="STY3606"
CDS	253939..254319	/note="synonym: yigF" /gene="STY3606" /note="Orthologue of E. coli yigF (YIGF-ECOLI); Fasta hit to YIGF-ECOLI (126 aa), 84% identity in 126 aa overlap. Contains a possible membrane spanning hydrophobic domain." /codon-start=1 /transl-table=11 /product="putative membrane protein" /protein-id="CAD07939.1" /db-xref="GI:16504484" /db-xref="SWISS-PROT:P31139" /translation="MDKDYINDGSLSEKWKYRFS FYDQHGFP GFWKVSPEYKQAFKAL KPRQRLTIQINFIAFFFSWIYLFVLGLWKKAIIV ILLGIVAIFIGALIGVNILGLVVA AYVG VNTNKWFYEKEVKGINTWSL"
gene	complement(254368..255318)	/gene="STY3607"

CDS

complement(254368..2553 /gene="STY3607"
18)

/note="Similar to Salmonella
typhimurium magnesium and cobalt
transport protein cora. magnesium
and cobalt transport protein cora
SW:CORA-SALTY (P31138) (316 aa)
fasta scores: E(): 0, 100.0% id in
316 aa, and to Escherichia coli
magnesium and cobalt transport
protein CorA corA SW:CORA-ECOLI
(P27841) (316 aa) fasta scores:
E(): 0, 97.5% id in 316 aa
Orthologue of E. coli corA
(CORA-ECOLI); Fasta hit to
CORA-ECOLI (316 aa), 98% identity
in 316 aa overlap"
/codon-start=1
/transl-table=11
/product="magnesium and cobalt
transport protein"
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/db-xref="GI:16504485"
/db-xref="GOA:P31138"
/db-xref="SWISS-PROT:P31138"
/translation="MLSAFQLEKNRLTRLEVEES
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FFEDAEDHAGNSTVAFTTIRDGRLF
TLRERELPAFRLYMRARSQAMVDGNAYELLLDL
FETKIEQLADEIENIYSDLEKLSR
VIMEGHQGDYDEALSTLAELEDIGWKVRLCLMD
TQRALNFLVRKARLPGGQLEQARE
ILRDIESLLPHNESLFQKVNFLMQAAMGFINIEQ
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GMNFEFMPPELKWSFGYPGAIIFMILAGLAPYLYF
KRKNWL"

misc-feature

complement(254371..2552
58)

/gene="STY3607"

/note="Pfam match to entry PF01544
CorA, CorA-like Mg2+ transporter
protein, score 423.90, E-value
1.5e-123"

gene

complement(255790..2579
52)

/gene="STY3608"

CDS

complement(255790..2579
52)

/note="synonym: uvrD"
/gene="STY3608"

/note="Fasta hit to REP-ECOLI (673
aa), 38% identity in 666 aa
overlap Orthologue of E. coli uvrD
(UVRD-ECOLI); Fasta hit to
UVRD-ECOLI (720 aa), 98% identity
in 720 aa overlap"
/codon-start=1
/transl-table=11
/product="DNA helicase II"
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/db-xref="GOA:Q8Z3B0"
/db-xref="SPTREMBL:Q8Z3B0"
/translation="MDVSYLLDSLNDKQREAVAA
PRSNMLVLGAGSGKTRVLVHRIA
WLLSVENNSPYSIMAVTFTNKAAAEMRHRIGQLM
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RAHELWLNKPHILOHYRERFTNIL
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IRLEQNYRSTSNILSVANALIENNNGRLGKKLWT
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RQTSRDRQLTLWQACRELLQEKAL
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 IKDSGLRTMYEQEKGEKGQOTRIEN
 LEELVTATRQFSYNDEDEDLMPLOAFLSHA
 ALEA
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 FPQVFIVGMEEGMFSPQMSLDEGWRLEEE
 RRLAY
 VGVTRAMQKLTLTYAETRRLYGKE
 VYHRPSRFIGELPEECVEEVRLRATVSRP
 VSHQR
 MGTPLAENDTGYKLGQVRVHAKFG
 EGTIVNLEGSGEHSRLQVAFQGGQIKWL
 VAAYAK
 LETV"

misc-feature complement (256483..2579
 25)

/gene="STY3608"

/note="Pfam match to entry PF00580
 UvrD-helicase, UvrD/REP helicase,
 score 769.70, E-value 1.2e-227"

misc-feature complement (257845..2578
 68)

/gene="STY3608"

/note="PS00017 ATP/GTP-binding
 site motif A (P-loop)"

SEQUENCE (SEQ) :

1	ggattctgct	agaatcagca	attatttttta	caaattgatac	agcgctaaat	actgcttcac
61	aacaaggaat	gcaaataaag	aaattgctcc	ccatccttat	cggcctgagc	ctgtcggggt
121	tcagcacact	aagccaggca	gagaacctga	tgcaagttaa	tcagcaagca	cgcctgagca
181	acccggaatt	gcgtaaatcc	gctgccgatac	gcgatgctgc	attcgaaaaa	attaacgaag
241	cacgtagtcc	tttactgccg	caactgggtt	taggtgccga	ctacacctac	agcaacgggt
301	atcgcgatgc	gaacgggtatc	aactccaatg	aaaccagcgc	ttctctgcaa	ttaacgcaga
361	cgctatttga	tatgtcgaaa	tggcgtgggc	tcaccctgca	agaaaaagca	gcaggcattc
421	aggatgtcac	ctatcagacc	gatcagcaga	cgtgatccct	caataccgcg	aacgcgtatt
481	ttaaggtatt	gaacgctatt	gatgtgcttt	cctataccca	ggcgcaaaaa	gaggctatct
541	accgtcagtt	agatcaaacg	acgcaacggt	ttaacgtggg	tctggtcgcc	attaccgacg
601	tgcaaaacgc	ccgtgcgcaa	tatgataccg	tactggcgaa	tgaagtgacc	gcccgcgaaca
661	acctggataa	cgcggtagaa	gagctgcgcg	aggttaaccg	caattattac	cggagctgg
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4 ANSWER 235 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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DIVISION CODE (CI): Primates
DATE (DATE): 24 Jun 2001
DEFINITION (DEF): Homo sapiens skeletal muscle potassium-dependent
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NCKX3 mRNA sequence.
SOURCE: ***human***
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
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Hominidae; Homo
NUCLEIC ACID COUNT (NA): 867 a 1024 c 1057 g 957 t
REFERENCE: 1 (bases 1 to 3905)
AUTHOR (AU): Kraev,A.; Quednau,B.D.; Leach,S.; Li,X.F.; Dong,H.;
Winkfein,R.; Perizzolo,M.; Cai,X.; Yang,R.;
Philipson,K.D.; Lytton,J.
TITLE (TI): Molecular cloning of a third member of the
potassium-dependent ***sodium*** - ***calcium***
exchanger gene family, NCKX3
J. Biol. Chem., 276 (25), 23161-23172 (***2001***)
OTHER SOURCE (OS): CA 136:145918
REFERENCE: 2 (bases 1 to 3905)
AUTHOR (AU): Quednau,B.D.; Philipson,K.D.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (17-JUL-2000) Physiology, UCLA School of
Medicine, 675 Charles Young Drive, MRL Bldg., Rm.
3-645, Los Angeles, CA 90095, USA

FEATURES (FEAT):

Feature Key	Location	Qualifier
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L4 ANSWER 236 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC): AF169257 GenBank (R)
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GenBank VERSION (VER): AF169257.2 GI:10334989
CAS REGISTRY NO. (RN): 289465-69-6
SEQUENCE LENGTH (SQL): 3637
MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 13 Jul 2001
DEFINITION (DEF): Homo sapiens potassium-dependent Na/Ca exchanger NCKX3
(SLC24A3) mRNA, partial cds.
SOURCE: ***human***
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
Hominidae; Homo
NUCLEIC ACID COUNT (NA): 818 a 928 c 943 g 948 t
COMMENT:
On Sep 28, 2000 this sequence version replaced gi:10119909.
REFERENCE: 1 (bases 1 to 3637)
AUTHOR (AU): Kraev,A.; Quednau,B.D.; Leach,S.; Li,X.F.; Dong,H.;
Winkfein,R.; Perizzolo,M.; Cai,X.; Yang,R.;
Philipson,K.D.; Lytton,J.
TITLE (TI): Molecular cloning of a third member of the
potassium-dependent ***sodium*** - ***calcium***
***exchanger*** gene family, NCKX3
JOURNAL (SO): J. Biol. Chem., 276 (25), 23161-23172 ( ***2001*** )
OTHER SOURCE (OS): CA 136:145918
REFERENCE: 2 (bases 1 to 3637)
AUTHOR (AU): Kraev,A.S.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (15-JUL-1999) Banting and Best Department of
Medical Research, University of Toronto, 112 College
Street, Toronto, ON M5G 1L6, Canada
REFERENCE: 3 (bases 1 to 3637)
AUTHOR (AU): Kraev,A.S.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (28-SEP-2000) Banting and Best Department of
Medical Research, University of Toronto, 112 College
Street, Toronto, ON M5G 1L6, Canada
REFERENCE: 4 (bases 1 to 3637)
AUTHOR (AU): Kraev,A.S.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (13-JUL-2001) Banting and Best Department of

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FEATURES (FEAT):

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CDS	<1..1878	/gene="SLC24A3" /function="ion transporter" /note="similar to Mus musculus protein in GenBank Accession Number AF314821 and to Rattus norvegicus protein in GenBank Accession Number AY009158" /codon-start=1 /product="potassium-dependent Na/Ca exchanger NCKX3" /protein-id="AAG12988.2" /db-xref="GI:14717396" /translation="RDLLSQLCFLASVALLLWS LSSLREQKELDLMDLVGEDRKWMM ARKLMQVNDTLTSEDAGLRNSKNCTEPALHEFPN DIFTNEDRRQGAVVLHVLCAIYMF YALAIVCDDFFVPSLEKICERLHLSDEVAGATFM AAGSSAPELFTSVIGVFITKGDVG VGTIVGSAVFNILCIIGVCGLFAGQVVALSSWCL LRDSIYYTSLSVIALIVFIYDEKVS WWESLVLVLMYLIYIVIMKYNACIHQCFERRTKG AGNMVNGLANNAEIDSSNCDATV VLLKKANFHRKASVIMVDELLSAYPHQLSFSEAG LRIMITSHFPPKTRLSMASRMLIN ERQRLINSRAYTNGESEVAIKIPIKHTVENGTGP SSAPDRGVNGTRRDDVVAEAGNET ENENEDNENDEEEEEDEDDDEGPYTPFDTPSGKL ETVKWAFTWPLSFVLYFTVPNCNK PRWEKWFMTVFASSTLWIAAFSYMMVWMVTIIGY TLGIPDVIMGITFLAAGTSVPDCM ASLIVARQGMGDMAVSNSIGSNVFDILIGLGLPW ALQTLAVDYGSIYRLNSRGLIYSV GLLLASVFVTVFGVHLNKWQLDKKLGCGCLLLYG VFLCFSIMTEFNVFTFVNLP MCGD H"

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L4 ANSWER 237 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC): AF177987 GenBank (R)
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GenBank VERSION (VER): AF177987.1 GI:6708126
CAS REGISTRY NO. (RN): 253164-31-7
SEQUENCE LENGTH (SQL): 2170
MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 11 Feb 2000
DEFINITION (DEF): Homo sapiens cone sodium-calcium potassium exchanger
splice variant (NCKX) mRNA, complete cds.
SOURCE:
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
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Hominidae; Homo
NUCLEIC ACID COUNT (NA): 550 a 539 c 506 g 575 t
REFERENCE:
1 (bases 1 to 2170)
AUTHOR (AU): Prinsen, C.F.; Szerencsei, R.T.; Schnetkamp, P.P.
TITLE (TI): Molecular cloning and functional expression of the
potassium-dependent ***sodium*** - ***calcium***
***exchanger*** from ***human*** and chicken
retinal cone photoreceptors
JOURNAL (SO): J. Neurosci., 20 (4), 1424-1434 ( ***2000*** )
OTHER SOURCE (OS): CA 132:332359
REFERENCE:
2 (bases 1 to 2170)
AUTHOR (AU): Prinsen, C.F.M.; Schnetkamp, P.P.M.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (17-AUG-1999) Physiology and Biophysics,
University of Calgary, 3330 Hospital Drive NW, Calgary,
ab T2N4N1, Canada

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LOCUS (LOC): AF177986 GenBank (R)
 GenBank ACC. NO. (GBN): AF177986
 GenBank VERSION (VER): AF177986.1 GI:6708124
 CAS REGISTRY NO. (RN): 253164-30-6
 SEQUENCE LENGTH (SQL): 2182
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Other vertebrates
 DATE (DATE): 11 Feb 2000
 DEFINITION (DEF): Gallus gallus clone dt3111 cone potassium-dependent
 sodium - ***calcium*** ***exchanger***
 (NCKX) mRNA, complete cds.
 SOURCE: chicken.
 ORGANISM (ORGN): Gallus gallus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Archosauria; Aves; Neognathae;
 Galliformes; Phasianidae; Phasianinae; Gallus
 NUCLEIC ACID COUNT (NA): 637 a 449 c 500 g 596 t
 REFERENCE: 1 (bases 1 to 2182)
 AUTHOR (AU): Prinsen, C.F.; Szerencsei, R.T.; Schnetkamp, P.P.
 TITLE (TI): Molecular cloning and functional expression of the
 potassium-dependent ***sodium*** - ***calcium***
 exchanger from ***human*** and chicken
 retinal cone photoreceptors
 JOURNAL (SO): J. Neurosci., 20 (4), 1424-1434 (***2000***)
 OTHER SOURCE (OS): CA 132:332359
 REFERENCE: 2 (bases 1 to 2182)
 AUTHOR (AU): Prinsen, C.F.M.; Schnetkamp, P.P.M.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (17-AUG-1999) Physiology and Biophysics,
 University of Calgary, 3330 Hospital Drive NW, Calgary,
 ab T2N4N1, Canada

FEATURES (FEAT):	Feature Key	Location	Qualifier
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L4 ANSWER 239 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC): AF177985 GenBank (R)
GenBank ACC. NO. (GBN): AF177985
GenBank VERSION (VER): AF177985.1 GI:6708122
CAS REGISTRY NO. (RN): 253164-29-3
SEQUENCE LENGTH (SQL): 2120
MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Other vertebrates
DATE (DATE): 11 Feb 2000
DEFINITION (DEF): Gallus gallus clone dt53 cone potassium-dependent
                    ***sodium*** - ***calcium*** ***exchanger***
                    (NCKX) mRNA, complete cds.
SOURCE: chicken.
ORGANISM (ORGN): Gallus gallus
                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                  Euteleostomi; Archosauria; Aves; Neognathae;
                  Galliformes; Phasianidae; Phasianinae; Gallus
NUCLEIC ACID COUNT (NA): 605 a 438 c 489 g 588 t
REFERENCE: 1 (bases 1 to 2120)
AUTHOR (AU): Prinsen, C.F.; Szerencsei, R.T.; Schnetkamp, P.P.
TITLE (TI): Molecular cloning and functional expression of the
             potassium-dependent ***sodium*** - ***calcium***
             ***exchanger*** from ***human*** and chicken
             retinal cone photoreceptors
JOURNAL (SO): J. Neurosci., 20 (4), 1424-1434 ( ***2000*** )
OTHER SOURCE (OS): CA 132:332359
REFERENCE: 2 (bases 1 to 2120)
AUTHOR (AU): Prinsen, C.F.M.; Schnetkamp, P.P.M.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (17-AUG-1999) Physiology and Biophysics,
              University of Calgary, 3330 Hospital Drive NW, Calgary,
              ab T2N4N1, Canada

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FEATURES (FEAT):
Feature Key      Location      Qualifier
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gene
CDS

1..2120
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L4 ANSWER 240 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): AF177984 GenBank (R)
GenBank ACC. NO. (GBN): AF177984
GenBank VERSION (VER): AF177984.1 GI:6708120
CAS REGISTRY NO. (RN): 253164-28-2

MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Other vertebrates
DATE (DATE): 9 Feb 2000
DEFINITION (DEF): Gallus gallus clone rp31 potassium-dependent
sodium - ***calcium*** ***exchanger***
NCKX1 (NCKX) mRNA, complete cds.
SOURCE: chicken.
ORGANISM (ORGN): Gallus gallus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Euteleostomi; Archosauria; Aves; Neognathae;
Galliformes; Phasianidae; Phasianinae; Gallus
NUCLEIC ACID COUNT (NA): 635 a 517 c 506 g 601 t
REFERENCE: 1 (bases 1 to 2259)
AUTHOR (AU): Prinsen, C.F.; Szerencsei, R.T.; Schnetkamp, P.P.
TITLE (TI): Molecular cloning and functional expression of the
potassium-dependent ***sodium*** - ***calcium***
exchanger from ***human*** and chicken
retinal cone photoreceptors
JOURNAL (SO): J. Neurosci., 20 (4), 1424-1434 (***2000***)
OTHER SOURCE (OS): CA 132:332359
REFERENCE: 2 (bases 1 to 2259)
AUTHOR (AU): Prinsen, C.F.M.; Schnetkamp, P.P.M.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (17-AUG-1999) Physiology and Biophysics,
University of Calgary, 3330 Hospital Drive NW, Calgary,
ab T2N4N1, Canada

FEATURES (FEAT):	Feature Key	Location	Qualifier
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CDS	66..2057		/gene="NCKX" /codon-start=1 /product="potassium-dependent sodium-calcium exchanger NCKX1" /protein-id="AAF25808.1" /db-xref="GI:6708121" /translation="MHLPRRRRLQNRRIFFFLAV VSLLSVYQLQFSPSAIPALLTAHQ HEDPVKVTSTREPFRNKTSKTGNVTAAPKIRHCVY IDPEPTVPITASEDTTQRENVNES YPDEKPVYESKGEYPQDLFSVEERRQGWWVLHIF GMMYVFVALAIVCDEYFVPALGVI TEKLQISEDVAGATFMAAGGSAPELFTSLIGVFI SHSNVGIGTIVGSAVFNILFVIGT CALFSREILHLTWPLFRDISFYIVDLLMLILFF LDSVIDWWESLLLLTAYATYVFTM KHNVSLEQWVKEELSKKLNVAQAASAEHMRKKSS VAVAEDGTPADGKKLQPTTALQR GTSSASLHNSQMRSTIFQLMIHTLDPLAGAKFKD RVDILSNIAKVKADSLTGQGTKPE AEEKQASQNTVQVTPASDSEPSKDKQKEDTPQD GPPSDSDNSDSSDSEDDSDDD STDDEENDEPLSLEWPETRRKKQAIYLFPIVFP LWSTIPDVRNPDSKKFFVITFFGS IIWIAAFSYLMVWWAHQVGETIGISEEIMGLTIL AAGTSIPDLITSVIVARKGLGDMA VSSSVGSNIFDITVGLPVPWFVLYSVFNGFSPVAV SSNGLFCAIVLLFLMLLFVLIISIA LCKWKMNKILGVTMFALYFVFLIISVMLEDRIIS CPVSV"

SEQUENCE (SEQ):

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L4 ANSWER 241 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC): AF097366 GenBank (R)
GenBank ACC. NO. (GBN): AF097366
GenBank VERSION (VER): AF097366.1 GI:6650378
CAS REGISTRY NO. (RN): 252170-99-3
SEQUENCE LENGTH (SQL): 2221
MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 11 Feb 2000
DEFINITION (DEF): Homo sapiens cone sodium-calcium potassium exchanger
(NCKX2) mRNA, complete cds.
SOURCE: ***human***
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
Hominidae; Homo
NUCLEIC ACID COUNT (NA): 574 a 545 c 515 g 587 t
REFERENCE: 1 (bases 1 to 2221)
AUTHOR (AU): Prinsen, C.F.; Szerencsei, R.T.; Schnetkamp, P.P.
TITLE (TI): Molecular cloning and functional expression of the
potassium-dependent ***sodium*** - ***calcium***
***exchanger*** from ***human*** and chicken
retinal cone photoreceptors
JOURNAL (SO): J. Neurosci., 20 (4), 1424-1434 ( ***2000*** )
OTHER SOURCE (OS): CA 132:332359
REFERENCE: 2 (bases 1 to 2221)
AUTHOR (AU): Prinsen, C.F.M.; Szerencsei, R.T.; Schnetkamp, P.P.M.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (05-OCT-1998) Physiology and Biophysics,
University of Calgary, 3330 Hospital Drive, NW,
Calgary, AB T2N 4N1, Canada

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Feature Key	Location	Qualifier
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VSI"

SEQUENCE (SEQ) :

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CAS REGISTRY NO. (RN): 392106-41-1
 SEQUENCE LENGTH (SQL): 2814
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 13 Mar 2001
 DEFINITION (DEF): Homo sapiens ***sodium*** / ***calcium***
 exchanger isoform NaCa3 (NCX1) mRNA, complete
 cds.

SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 754 a 579 c 718 g 763 t

REFERENCE: 1 (bases 1 to 2814)
 AUTHOR (AU): Van Eylen, F.; Bollen, A.; Herchuelz, A.
 TITLE (TI): NCX1 Na/Ca exchanger splice variants in pancreatic
 islet cells

JOURNAL (SO): J. Endocrinol., 168 (3), 517-526 (***2001***)

OTHER SOURCE (OS): CA 134:351070

REFERENCE: 2 (bases 1 to 2814)

AUTHOR (AU): Van Eylen, F.; Bollen, A.; Herchuelz, A.

TITLE (TI): Direct Submission

JOURNAL (SO): Submitted (23-NOV-1998) Pharmacodynamie, Brussels Free
 University, Route de Lennik 808, C.P. 617, Brussels
 1070, Belgium

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..2814	/organism="Homo sapiens" /db-xref="taxon:9606"
gene	1..2814	/gene="NCX1"
CDS	1..2814	/gene="NCX1" /note="isoform NCX1.3" /codon-start=1 /product="sodium/calcium exchanger isoform NaCa3" /protein-id="AAF08988.1" /db-xref="GI:6453729" /translation="MYNMRRLSLSPTFSMGFHLL VTVSLLFSHVDHVIAETEMEGEGN ETGECTGSYYCKKGVILPIWEPQDPSFGDKIARA TVYFVAMVYMFLGVSIIADRFMSS IEVITSQEKEITIKKPNGETTKTTVRIWNETVSN LTLMALGSSAPEILLSVIEVCGHN FTAGDLGPSTIVGSAAFNMFIILALCVYVVPDGE TRKIKHLRVFFVTAAWSIFAYTWL YIILSVISPGVVEVWEGLLTFFFFPICVVFVAWA DRRLLFYKYVYKRYRAGKQKRGMI EHGDRPSSKTEIEMDGKVVNSHVENFLDGLVL EVDERDQDDEEARREMARILKELK QKHPDKEIEQLIELANYQVLSQQQKSRAFYRIQA TRLMTGAGNILKRHAADQARKAVS MHEVNTTEVTENDPVSKIFFEQGTQCLENCGTVA LTIIRRGDLTNTVFVDFRTEDGT ANAGSDYEFTEGTVVFVKPGDTQKEIRVGIIDDDI FEEDENFLVHLSNVKVSSEASEDG ILEANHVSTLACLGSPSTATVTIFDDDHAGIFTF EEPVTHVSESIGIMEVKVLRITSGA RGNVIVPYKTIEGTARGGGEDFEDTCGELEFQND EIVKIITIRIFDREEYEKESFSL VLEPKWIRRGMKGGFTITDEYDDKQPLTSKEEE ERRIAEMGRPILGEHTKLEVIIEE SYEFKSTVDKLIKTNLALVGTNSWREQFIEAI TVSAGEDDDDDDECGEKLPSCFDY VMHFLTTFWKVLFVFPPTFYWNGWACFIVSILM IGLLTAFIGDLASHFGCTIGLKDS VTAVVFVALGTSVPDTFASKVAATQDQYADASIG NVTGSNAVNVFLGIGVAWSIAAIY HAANGEQFKVSPGTTLAFSVTLFTIFAFINVGVL YRRRPEIGGELGGPRTAKLLTSC FVLLWLLYIFFSSLEAYCHIKGF"

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L4 ANSWER 243 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC): AF108388 GenBank (R)
GenBank ACC. NO. (GBN): AF108388
GenBank VERSION (VER): AF108388.1 GI:6453726
CAS REGISTRY NO. (RN): 248898-86-4
SEQUENCE LENGTH (SQL): 2883
MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 13 Mar 2001
DEFINITION (DEF): Homo sapiens ***sodium*** / ***calcium***
***exchanger*** isoform NaCa7 (NCX1) mRNA, complete
cds.
SOURCE: ***human***
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
Hominidae; Homo
NUCLEIC ACID COUNT (NA): 772 a 598 c 731 g 782 t
REFERENCE: 1 (bases 1 to 2883)
AUTHOR (AU): Van Eylen, F.; Bollen, A.; Herchuelz, A.
TITLE (TI): NCX1 Na/Ca exchanger splice variants in pancreatic
islet cells
JOURNAL (SO): J. Endocrinol., 168 (3), 517-526 ( ***2001*** )
OTHER SOURCE (OS): CA 134:351070
REFERENCE: 2 (bases 1 to 2883)
AUTHOR (AU): Van Eylen, F.; Bollen, A.; Herchuelz, A.
TITLE (TI): Direct Submission

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FEATURES (FEAT):

Feature Key	Location	Qualifier
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L4 ANSWER 244 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC): HSY13035 GenBank (R)
GenBank ACC. NO. (GBN): Y13035
GenBank VERSION (VER): Y13035.1 GI:2463217
CAS REGISTRY NO. (RN): 197682-66-9
SEQUENCE LENGTH (SQL): 830
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 27 Oct 2000
DEFINITION (DEF): Homo sapiens ncx1 gene, exon 1e.
SOURCE: ***human***
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
Hominidae; Homo
NUCLEIC ACID COUNT (NA): 269 a 151 c 192 g 218 t
REFERENCE: 1 (bases 1 to 830)
AUTHOR (AU): Scheller,T.; Kraev,A.; Skinner,S.; Carafoli,E.
TITLE (TI): Cloning of the multipartite promoter of the
***sodium*** - ***calcium*** ***exchanger***
gene NCX1 and characterization of its activity in
vascular smooth muscle cells
JOURNAL (SO): J. Biol. Chem., 273 (13), 7643-7649 ( ***1998*** )
OTHER SOURCE (OS): CA 129:1331
REFERENCE: 2 (bases 1 to 830)
AUTHOR (AU): Kraev,A.S.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (06-MAY-1997) A.S. Kraev, Swiss Federal
Institute of Technology, Laboratory of Biochemistry
III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

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FEATURES (FEAT):		
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		/map="p22.3-p23.1"
		/clone="202E10A"
		/clone-lib="CEPH BAC"
		/dev-stage="adult"
gene	347..580	/gene="ncx1"
exon	347..580	/gene="ncx1"
		/note="number 1e"

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SEQUENCE (SEQ):
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61 gtgtatacaa ggcctgtgct ttggcttttc aaagaatgca gatgatgaag aaaagttagt

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181 ctcatgtgat gcttatgagt attctgcagg acaaggaagc atcatttttc tgacttaagg
241 atgaagacta tgggttcagt aaataacttg ggccaagggc taacaagtaa tgggtaataa
301 ggaaggctct ccaaaagcca tgctctacac tgttctctgt tcccagggat gtcattggtc
361 agaacaccta tgctgaagta caaggctgag caagaaagat cactccactg caactgagca
421 aagtgtctga ggagttgaaa ggaagaagag aacattggac gtgggtttcac ggaggaggaa
481 gcatttttaatt ttattcagaa agagtgaataa ggatttttgaa agcaaataag gctagccact
541 tttgaaacat gtcaaagagc cccagcttat ttacgacaag gtaaccgtgg agaaatgtta
601 gggcagtttc tagacccttt cattccgttc tgtgtcccag tcaggaccat gccacagaaa
661 caggatctga aacaaataac aacataagcc attgtacaaa tgcattttat acttgacacc
721 aaaatgtagg atgaacttcc agcatcgctt tggaggagag aggctatacc agtcagaggt
781 gaggaagag acagaccact tgctaacttg tcctttatta aaggtgatga

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L4 ANSWER 245 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSY13034 GenBank (R)
 GenBank ACC. NO. (GBN): Y13034
 GenBank VERSION (VER): Y13034.1 GI:2463216
 CAS REGISTRY NO. (RN): 197682-65-8
 SEQUENCE LENGTH (SQL): 5282
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 27 Oct 2000
 DEFINITION (DEF): Homo sapiens ncx1 gene, exon 1a, 1b and 1c.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 1403 a 1205 c 1341 g 1333 t

COMMENT:
 Related sequences: L06438, U04934, L35846, U67073, T29777, X92368,
 X68812, U04935.

REFERENCE: 1 (bases 1 to 5282)
 AUTHOR (AU): Scheller, T.; Kraev, A.; Skinner, S.; Carafoli, E.
 TITLE (TI): Cloning of the multipartite promoter of the
 sodium - ***calcium*** ***exchanger***
 gene NCX1 and characterization of its activity in
 vascular smooth muscle cells
 J. Biol. Chem., 273 (13), 7643-7649 (***1998***)
 OTHER SOURCE (OS): CA 129:1331

REFERENCE: 2 (bases 1 to 5282)
 AUTHOR (AU): Kraev, A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (06-MAY-1997) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..5282	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p22.3-p23.1" /clone="202E10A" /clone-lib="CEPH BAC" /dev-stage="adult"
exon	2260..2537	/gene="ncx1" /note="number 1c"
gene	2260..4020	/gene="ncx1"
exon	2840..3163	/gene="ncx1" /note="number 1b"
exon	3690..3794	/gene="ncx1" /note="number 1a"
STS	3857..4020	/gene="ncx1" /note="D2S2328"

SEQUENCE (SEQ):

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1 aaagcaaaga accctggatc tactcatcag caaagaaaac ctaaagaaca aaactgggaa
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121 tggccaggct aggggctatt atgtaataac attttcttat gtagaaatca ctatgaaact
181 gagcctgtga ctgaacagat aggtgattag tgaaggctgg cagagtaaga aatgaggtga
241 gggacgacta agactgtatt aacatatttc agaagcccga agcaatggaa gagacaatag
301 aggtacctct gatttatgta attcaaagta aaaatgaaag gaatttaaac agagtattgt
361 gcttggttttc cctatgatga aaacatattg agtactttag taaagtatta aatattttta

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481	ctaattcaca	atatattacac	ttggtctgaa	aatgagtttg	ctaacagatc	ccctgaaggt
541	ttcctagga	atagtttgtg	aacatcagaa	catctttcga	atatatcaaa	tcttagtgat
601	atccctgtgg	agtcccttga	atggttgtgt	cgtattgctt	tggttagata	acagtgagga
661	cccgtgact	cttaattcca	agtccagagg	aaagaatggc	aatcaatatg	gaagagtga
721	attaagaaac	attactgcta	ttagaatgta	aattaccacc	ttcctccatt	caacatgtct
781	tctttccaaa	gccacagact	gcagcagcct	cactttttcc	tttcttagag	ccatagtctt
841	cctcagcctt	gtgcctgtga	tgcagccttt	gataattctc	gcaataaaaa	ctcactcatg
901	tatgacattt	aggagggagc	aaaaggtttg	atgtgccttg	gggccctgga	accattataa
961	aatgcctttt	aaagagaaat	gaaaggcaaa	gaaaattagg	ggctcagaaa	ctgactgaac
1021	caaaaaggat	gccaaatcac	taggcactag	gctgcctctc	caatagtctt	agataaacag
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1141	tggaaaagag	gaagaatcaa	gtggccaaga	tgtagccttt	cagtttcaat	ggtcaaagca
1201	aaaaaaaaaa	aaaaaaagtc	ttaagacaga	ctttgggcat	cactggaata	taaacattta
1261	aagaacaggg	ttcttgtcac	tccatgtcac	aaacatgcct	aaaatttcaa	gaaaatctca
1321	gctttcacta	agcgggccgt	catagcaata	agaggctaca	ctctttccac	aaaatctatt
1381	ccagtgaat	atggccact	cacattttca	tttagctttc	tcttggttcc	ttcatttggc
1441	tgtgttctat	ttcttattga	gtggagtctt	tagttataag	ctttccttag	tgttatttag
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1981	gtattggcct	agagcagtgg	ttctcaacct	tcattgcaca	taggaatcaa	ccaggcatct
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2161	gggttgagag	ccactggcac	aggggcagaa	gaggtatatt	cttccattcc	gccccctttt
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2761	ttttttccca	ctcaacctta	atgctcggct	tttactcctc	actgtagttt	aaaaccagca
2821	cgcttttcac	acgaaacaga	ctctgggtct	ttattcccag	gtgaaacgca	tctttgaggg
2881	aaataccaac	acagagactc	tgtcccagtt	cttggccggg	ggacaccctc	ccccgatat
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3241	gtgtcgagag	acacagctag	cgcgcggcca	caacgcactg	cggggccgag	agccggcagg
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3961	gtgtgtgtgt	cgcgcctgca	catttttctg	ggtgtccgcg	cttcccagag	tggaaattgct
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 5161 ctgatcagat ctggttaaag gcattgctgg agtatctcca gatatgagca gttgaacatg
 5221 cacaatctga gacttgtgcg aagatttccc aagggaaga gggagccacc aggagagaat
 5281 tc

L4 ANSWER 246 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSY13033 GenBank (R)
 GenBank ACC. NO. (GBN): Y13033
 GenBank VERSION (VER): Y13033.1 GI:2463214
 CAS REGISTRY NO. (RN): 197682-64-7
 SEQUENCE LENGTH (SQL): 563
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 27 Oct 2000
 DEFINITION (DEF): Homo sapiens NCX1 mRNA alternative 5'end, exon 1c and 2.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo
 NUCLEIC ACID COUNT (NA): 142 a 134 c 129 g 158 t
 COMMENT:
 Related sequences: M91368, X91213.
 REFERENCE: 1 (bases 1 to 563)
 AUTHOR (AU): Scheller,T.; Kraev,A.; Skinner,S.; Carafoli,E.
 TITLE (TI): Cloning of the multipartite promoter of the
 sodium - ***calcium*** ***exchanger***
 gene NCX1 and characterization of its activity in
 vascular smooth muscle cells
 J. Biol. Chem., 273 (13), 7643-7649 (***1998***)
 OTHER SOURCE (OS): CA 129:1331
 REFERENCE: 2 (bases 1 to 563)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (06-MAY-1997) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..563	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p22.3-p23.1" /tissue-type="heart" /dev-stage="adult" /note="number 1c"
exon	1..278	/number=2
exon	278..>563	/gene="ncx1"
gene	312..563	/gene="ncx1"
CDS	312..>563	/codon-start=1 /protein-id="CAA73478.1" /db-xref="GI:2463215" /translation="MRRLSLSPTFMSMGFHLTVTV SLLFSHVDHVIAETEMELEGNETG ECTGSYYCKKGVLPIWEPQDPSFGDKIARATVY FVAMVY"

SEQUENCE (SEQ):

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121 tgctcctgac cccccacac accttggcaa acgacaccag tggccgatag caactggtgt
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301 tcatgtacaa catgcggcga ttaagtcttt caccacactt ttcaatggga ttcatctgt
361 tagttactgt gagtctctta ttttcccatg tggaccatgt aattgctgag acagaaatgg
421 aaggagaagg aaatgaaact ggtgaatgta ctggatcata ttactgtaag aaaggggtga
481 ttttgcccat ttgggaaccc caagaccctt cttttgggga caaaattgct agagctactg
541 tgtattttgt ggccatggtc tac

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L4 ANSWER 247 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSY13032 GenBank (R)
 GenBank ACC. NO. (GBN): Y13032
 GenBank VERSION (VER): Y13032.1 GI:2463212
 CAS REGISTRY NO. (RN): 197682-63-6
 SEQUENCE LENGTH (SQL): 583
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 27 Oct 2000
 DEFINITION (DEF): Homo sapiens NCX1 mRNA alternative 5'end, exon 1a, 1e and 2.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo
 NUCLEIC ACID COUNT (NA): 178 a 107 c 151 g 147 t
 COMMENT:
 Related sequences: M91368, X91213.
 REFERENCE: 1 (bases 1 to 583)
 AUTHOR (AU): Scheller,T.; Kraev,A.; Skinner,S.; Carafoli,E.
 TITLE (TI): Cloning of the multipartite promoter of the
 sodium - ***calcium*** ***exchanger***
 gene NCX1 and characterization of its activity in
 vascular smooth muscle cells
 J. Biol. Chem., 273 (13), 7643-7649 (***1998***)
 OTHER SOURCE (OS): CA 129:1331
 REFERENCE: 2 (bases 1 to 583)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (06-MAY-1997) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..583	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p22.3-p23.1" /tissue-type="heart" /dev-stage="adult"
exon	1..105	/note="number 1a"
variation	104	/replace="a"
exon	106..339	/note="number 1e"
exon	339..>583	/number=2
gene	373..583	/gene="ncx1"
CDS	373..>583	/gene="ncx1" /codon-start=1 /protein-id="CAA73477.1" /db-xref="GI:2463213" /translation="MRRLSLSPTFSMGFHLLVTV SLLFSHVDHVIAETEMEGETG ECTGSYYCKKGVILPIWEPQDPSFGD"

SEQUENCE (SEQ):

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61 gcgtggagga acggaggaag aatccattca cactcccaa accggggatg tcatgggtcta
121 gaacacctat gctgaagtac aaggctgagc aagaaagatc actccactgc aactgagcaa
181 agtgcctgaag gagttgaaag gaagaagaga acatcggacg tggtttcacg gaggaggaag
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361 gtcattgtaca acatgcggcg attaatgtct tcacccacct tttcaatggg atttcatctg
421 ttagttactg tgagtctctt attttcccat gtggaccatg taattgctga gacagaaatg
481 gaaggagaag gaaatgaaac tggatgaatg actggatcat attactgtaa gaaaggggtg
541 attttgcca tttgggaacc ccaagacctt tcttttgggg aca
  
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L4 ANSWER 248 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSY12885 GenBank (R)
 GenBank ACC. NO. (GBN): Y12885
 GenBank VERSION (VER): Y12885.1 GI:2463210
 CAS REGISTRY NO. (RN): 197682-62-5
 SEQUENCE LENGTH (SQL): 328
 MOLECULE TYPE (CI): mRNA; linear

DATE (DATE): 27 Oct 2000
 DEFINITION (DEF): Homo sapiens NCX1 mRNA alternative 5'end, exon 1d and 2.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 90 a 61 c 82 g 95 t

COMMENT:
 Related sequences: M91368, X91213.

REFERENCE: 1 (bases 1 to 328)
 AUTHOR (AU): Scheller,T.; Kraev,A.; Skinner,S.; Carafoli,E.
 TITLE (TI): Cloning of the multipartite promoter of the
 sodium - ***calcium*** ***exchanger***
 gene NCX1 and characterization of its activity in
 vascular smooth muscle cells
 J. Biol. Chem., 273 (13), 7643-7649 (***1998***)
 CA 129:1331

REFERENCE: 2 (bases 1 to 328)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (01-MAY-1997) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..328	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p22.3-p23.1" /tissue-type="heart" /dev-stage="adult"
exon	1..84	/note="number 1d"
exon	85..>328	/number=2
gene	118..328	/gene="ncx1"
CDS	118..>328	/gene="ncx1" /codon-start=1 /protein-id="CAA73386.1" /db-xref="GI:2463211" /translation="MRRLSLSPTFSMGFHLLVTV SLLFSHVDHVIAETEMEGETG ECTGSYYCKKGVILPIWEPQDPSFGD"

SEQUENCE (SEQ):

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121 cggcgattaa gtcctttcacc caccttttca atgggatttc atctgttagt tactgtgagt
181 ctcttatttt cccatgttga ccatgtaatt gctgagacag aaatggaagg agaaggaaat
241 gaaactggtg aatgtactgg atcatattac tgtaagaaag gggtgatttt gcccatattg
301 gaacccaag acccttcttt tggggaca
  
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L4 ANSWER 249 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSY12878 GenBank (R)
 GenBank ACC. NO. (GBN): Y12878
 GenBank VERSION (VER): Y12878.1 GI:2463208
 CAS REGISTRY NO. (RN): 197683-37-7
 SEQUENCE LENGTH (SQL): 558
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 27 Oct 2000
 DEFINITION (DEF): Homo sapiens NCX1 mRNA alternative 5'end, exon 1d, 1c and 2.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 146 a 132 c 126 g 154 t

COMMENT:
 Related sequences: M91368, X91213.

REFERENCE: 1 (bases 1 to 558)

TITLE (TI): Cloning of the multipartite promoter of the
 sodium - ***calcium*** ***exchanger***
 gene NCX1 and characterization of its activity in
 vascular smooth muscle cells
 J. Biol. Chem., 273 (13), 7643-7649 (***1998***)
 JOURNAL (SO): CA 129:1331
 OTHER SOURCE (OS):
 REFERENCE: 2 (bases 1 to 558)
 AUTHOR (AU): Kraev, A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (01-MAY-1997) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..558	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p22.3-p23.1" /tissue-type="heart" /dev-stage="adult" /note="number 1d" /note="number 1c"
exon	1..84	/number=2
exon	85..273	/number=2
exon	273..>558	/number=2
gene	307..558	/gene="ncx1"
CDS	307..>558	/gene="ncx1" /codon-start=1 /protein-id="CAA73378.1" /db-xref="GI:2463209" /translation="MRRLSLSPTFSMGFHLTVTV SLLFSDVDHVIATETEMEGETG ECTGSYYCKKGVILPIWEPQDPSFGDKIARATVY FVAMVY"

SEQUENCE (SEQ):

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541 tttgtggcca tgggtctac
  
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L4 ANSWER 250 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): RNU53420 GenBank (R)
 GenBank ACC. NO. (GBN): U53420
 GenBank VERSION (VER): U53420.1 GI:1552525
 CAS REGISTRY NO. (RN): 181290-29-9
 SEQUENCE LENGTH (SQL): 4854
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Rodents
 DATE (DATE): 4 Oct 1996
 DEFINITION (DEF): Rattus norvegicus ***sodium*** - ***calcium***
 exchanger form 3 (NCX3) mRNA, complete cds.
 SOURCE: Norway rat.
 ORGANISM (ORGN): Rattus norvegicus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Rodentia;
 Sciurognathi; Muridae; Murinae; Rattus
 NUCLEIC ACID COUNT (NA): 1162 a 1216 c 1267 g 1209 t
 REFERENCE: 1 (bases 1 to 4854)
 AUTHOR (AU): Nicoll, D.A.; Quednau, B.D.; Qui, Z.; Xia, Y.R.;
 Lusi, A.J.; Philipson, K.D.
 TITLE (TI): Cloning of a third mammalian Na⁺-Ca²⁺ exchanger, NCX3
 J. Biol. Chem., 271 (40), 24914-24921 (***1996***)
 OTHER SOURCE (OS): CA 125:267098
 REFERENCE: 2 (bases 1 to 4854)
 AUTHOR (AU): Nicoll, D.A.; Philipson, K.D.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (02-APR-1996) Physiology, University of

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..4854	/organism="Rattus norvegicus" /strain="Sprague-Dawley" /db-xref="taxon:10116" /map="tightly linked to D12Ucla3" /note="maps to chromosome 12 in mouse and 14q21-31 in human"
gene	1..4854	/gene="NCX3"
CDS	834..3617	/gene="NCX3" /note="similar to human ncx2 product encoded by GenBank Accession Number X93017" /codon-start=1 /product="sodium-calcium exchanger form 3" /protein-id="AAC52817.1" /db-xref="GI:1552526" /translation="MAWLRLQPLTSAFLHFGGLVT FVLFLNGLRAEAGDLRDVPSAGQN NESC SGSSDCKEGVILPIWYPENPSLGDKIARVI VYFVALIYMFLGVSIIADRFMASI EVITSQEREVTIKKPNGETSTTTIRVWNETVSNL TLMALGSSAPEILLSLIEVCCHGF IAGDLGPSTIVGSAAFNMFIIGICVYVIPDGET RKIKHLRVFFVTAAWSVFAYIWLY MILAVFSPGVVQVWEGLLTLFFFPVCVLLAWVAD KRLLFYKYMCHKRYRTDKHRGIIIE TEGEHPKGIEMDGKMMNSHFLDGNLIPLEGKEVD ESRREMIRILKDLKQKHPEKDLDQ LVE MANYYALSHQOKSRAFYRIQATRM MTGAGNI LKKHAAEQAKKTASMSEVHTDEPE DFASKVFFDPCSYQCLENC GAVLLTVVRKGGDIS KTMVVDYKTEDGSANAGADYEFTE GTVVLKPGETQKEFSVGIIDDDIFEEDEHFFVRL SNVRVEEQLEEGMTPAILNSLPL PRAVLASPCVATVTILDDDHAGIFTFECDTIHVS ESIGVMEVKVLRTSGARGTVIVPF RTVEGTAKGGGEDFEDTYGELEFKNDET VKTIRV KIVDEEEYERQENFFIALGEPKWM ERGISALLLSPEVTD RKL TMEEEEAKRIAEMGKP VLGEHPKLEVIIIEESYEFKSTVDK LIKKTNLALVVGTHSWRDQFMEAITVSAAGDEEE DESGEERLPSCFDYVMHFLT VFWK VLFACVPPTYCHGWACFVVSILIIIGMLTAIIGD LASHFGCTIGLKDSVTAVVFVAFG TSVPD TFASKAAALQDVYADASIGNVTGSNAVN V FLGIGLAWSVA AIYWAMQGQEFHV SAGTLAFSVTLFTIFAFVCLSVLLYRRRPHLGGE LGGPRGCKLATTWL FVSLWLLYL FATLEAYCYIKGF"

SEQUENCE (SEQ):

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121	tcctatgttt	aatgtgtgaa	cagaagagag	gaggataagg	tgactggctc	ttaagatcga
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421	gaaactgccc	catgtgcaat	ccacttaaca	ctcaaccggg	ccttgccctga	gccactcagg
481	cagtcacctg	ttcttggtcg	ggcgccgagg	gtccgtataca	cccgcctctg	tccctggccc
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841	ggttacggct	gcagcctctc	acctctgcct	tcctccattt	cgggctgggt	acttttctgc
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1021	ggtatccaga	gaacccttcc	cttgggggaca	agattgcaag	ggtcattgtc	tattttgtgg
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L4 ANSWER 251 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

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LOCUS (LOC):          OSTA136      GenBank (R)
GenBank ACC. NO. (GBN): X91807
GenBank VERSION (VER):  X91807.1  GI:1136121
CAS REGISTRY NO. (RN):  172012-10-1
SEQUENCE LENGTH (SQL):  1677
MOLECULE TYPE (CI):     mRNA; linear
DIVISION CODE (CI):     Plants, fungi, algae
DATE (DATE):            3 Nov 2000
DEFINITION (DEF):       O.sativa mRNA for alpha-tubulin (clone OSTA-136).
SOURCE:                  Oryza sativa (japonica cultivar-group).
ORGANISM (ORGN):        Oryza sativa (japonica cultivar-group)

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Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida;
Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza
NUCLEIC ACID COUNT (NA): 310 a 507 c 471 g 389 t
COMMENT:

Overlaps with Z11931.

REFERENCE: 1 (bases 1 to 1677)
AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
TITLE (TI): The organization of the ***human*** gene NCX1
encoding the ***sodium*** - ***calcium***
exchanger
JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
OTHER SOURCE (OS): CA 125:267114
REFERENCE: 2 (bases 1 to 1677)
AUTHOR (AU): Maestroni,A.; Giani,S.; Breviario,D.
TITLE (TI): Rice alpha-tubulin cDNAs
JOURNAL (SO): Unpublished
REFERENCE: 3 (bases 1 to 1677)
AUTHOR (AU): Breviario,D.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (25-SEP-1995) D. Breviario, Istituto
Biosintesi Vegetali CNR, Via Bassini n 15, I-20133
Milano, ITALY

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..1677	/organism="Oryza sativa (japonica cultivar-group)" /cultivar="Arborio" /db-xref="taxon:39947" /clone="OSTA-136" /tissue-type="coleoptile" /clone-lib="lambda zapII" /dev-stage="3 days old seedling"
gene	82..1437	/gene="tubA"
CDS	82..1437	/gene="tubA" /codon-start=1 /product="alfa-tubulin" /protein-id="CAA62917.1" /db-xref="GI:1136122" /db-xref="SPTREMBL:Q43606" /translation="MRECISIHIGQAGIQVGNAC WELYCLEHGIQPDGQMPGDKTVGG GDDAFNTFFSETGAGKHVPRAVFVDLEPTMIDEV RTGDYRQLFHPEQVISGKEDAANN FARGHYTIGKEIVDLCLDRIRKLADNCTGLQGFL VFNAVGGGTGSGGLGSLLLERLSVD YGKSKSLGFTVYPSPQVSTSVVEPYNSVLSTHSL LEHTDVAVLLDNEAIYDICRRSLD IERPTYTNRNRLVSQVISSLTASLRFDGALNVDV NEFQTNLVPYPRIHFMLSSYAPAI SAEKAYHEQLSVAEITNSAFEPSSMMAKCDPRHG KYMACLMYRGDVVPKDVNAAVAT IKTKRTIQFVDWCPTGFKCGINYQPPSVVPGGDL AKVQRAVCMISNSTSVVEVFSRID IKFDLMYSKRAFVHWYVGEEMEEGEFSEAREDLA ALEKDYEYEVGSEFDDGDEGDEGDE Y"

SEQUENCE (SEQ):

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L4 ANSWER 252 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSNCX22 GenBank (R)
 GenBank ACC. NO. (GBN): X93017
 GenBank VERSION (VER): X93017.1 GI:1067133
 CAS REGISTRY NO. (RN): 170817-51-3
 SEQUENCE LENGTH (SQL): 2534
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 12 Nov 2000
 DEFINITION (DEF): Homo sapiens partial SCL8A3 gene for solute carrier family 8 (***sodium*** / ***calcium*** ***exchanger***), member 3 (SCL8A3), exon 2.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
 NUCLEIC ACID COUNT (NA): 602 a 595 c 644 g 693 t
 COMMENT:
 Similar to X91213.
 REFERENCE: 1 (bases 1 to 2534)
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): The organization of the ***human*** gene NCX1 encoding the ***sodium*** - ***calcium*** ***exchanger***
 JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114
 REFERENCE: 2 (bases 1 to 2534)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (14-NOV-1995) A.S. Kraev, Swiss Federal Institute of Technology, Laboratory of Biochemistry III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..2534	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="14" /map="q24.1" /cell-line="WI38" /cell-type="fibroblast" /tissue-type="lung" /clone-lib="Stratagene genomic #946204"
gene	281..2126	/gene="SLC8A3"
exon	281..2126	/gene="SLC8A3" /number=2 /product="solute carrier family 8 (sodium/calcium exchanger), member 3"

SEQUENCE (SEQ):

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601 atgttccttg ggggtgccat cattgctgac cgcttcacatgg catctattga agtcatcacc
661 tctcaagaga gggaggtgac aattaagaaa cccaatggag aaaccagcac aaccactatt
721 cgggtctgga atgaaactgt ctccaacctg acccttatgg ccctgggttc ctctgctcct
781 gagatactcc tctctttaat tgaggtgtgt ggtcatgggt tcattgctgg tgatctggga
841 ccttctacca ttgtaggagg tgcagccttc aacatgttca tcatcattgg catctgtgtc
901 tacgtgatcc cagacggaga gactcgcaag atcaagcatc tacgagtctt cttcatcacc
961 gctgcttgga gtatctttgc ctacatctgg ctctatatga ttctggcagt cttctcccct
1021 ggtgtggtcc aggttttggga aggcctcctc actctcttct tctttccagt gtgtgtcctt
1081 ctggcctggg tggcagataa acgactgctc ttctacaaat acatgcacaa aaagtaccgc
1141 acagacaaac accgaggaat tatcatagag acagagggtg accaccctaa gggcattgag
1201 atggatggga aaatgatgaa ttcccatttt ctagatggga acctgggtgc cctggaaggg
1261 aaggaagtgg atgagtcccg cagagagatg atccggattc tcaaggatct gaagcaaaaa
1321 caccagaga aggacttaga tcagctgggt gagatggcca attactatgc tctttccac
1381 caacagaaga gccgcgcctt ctaccgtatc caagccactc gtatgatgac tgggtgcaggc
1441 aatattctga agaaacatgc agcagaacaa gccagaagg cctccagcat gaggcagggtg
1501 cacaccgatg agcctgagga ctttatttcc aaggtcttct ttgtaccatg ttcttaccag
1561 tgcttgaga actgtggggc tgtactcctg acagtgggtg ggaaaggggg agacatgtca
1621 aagaccatgt atgtggacta caaaacagag gatggttctg ccaatgcagg ggctgactat
1681 gagttcacag agggcacggt ggttctgaag ccaggagaga cccagaaggga gttctccgtg
1741 ggcataattg atgacgacat ttttgaggag gatgaacact tctttgtaag gttgagcaat
1801 gtccgcatag aggaggagca gccagaggag gggatgcctc cagcaatatt caacagtctt
1861 cccttgctc gggctgtcct agcctcccct tgtgtggcca cagttaccat cttggatgat
1921 gaccatgcag gcatcttcac ttttgaatgt gatactatc atgtcagtga gagtattggt
1981 gttatggagg tcaaggttct gcggacatca ggtgcccggg gtacagtcac cgtccccttt
2041 aggacagtag aagggacagc caagggtggc ggtgaggact ttgaagacac atatggggag
2101 ttggaattca agaattgatga aactgtgtaa gtaaccttcc tgtattctgc ccctccctga
2161 ccccatcttt tgccatctct ttctgtcctt ctgtactgca ctttacaaca tttccttggtg
2221 tttgtgttaa tgtcaaaact ttgttccatc acaggtatgc aggatcagca gacaccactg
2281 gacaggttct gcttccaaac tcttcttcag ttttctcact ttaaattggt tctgggcaag
2341 gaatcctgtg acaagagcta aggacacaaa acattttctt ctctgaaaca caaatgata
2401 gctggtggag ctgtgggatg acagaagttt tgtgatatca gattttggag aattcttggtg
2461 actaagaagg actagagaac tgcttgggac tcttcttctc cccttctca tatgaagggt
2521 atctatgagc tttg

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LOCUS (LOC): HSNCX19 GenBank (R)
GenBank ACC. NO. (GBN): X91216
GenBank VERSION (VER): X91216.1 GI:1061138
CAS REGISTRY NO. (RN): 170612-18-7
SEQUENCE LENGTH (SQL): 431
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 24 Nov 2000
DEFINITION (DEF): H.sapiens ncx1 gene (exon 9).
SOURCE: ***human***
ORGANISM (ORGN): Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
Hominidae; Homo

```

NUCLEIC ACID COUNT (NA): 127 a 95 c 108 g 101 t

REFERENCE:

```

AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
TITLE (TI): The organization of the ***human*** gene NCX1
encoding the ***sodium*** - ***calcium***
***exchanger***

```

JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)

OTHER SOURCE (OS): CA 125:267114

REFERENCE:

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2 (bases 1 to 431)
AUTHOR (AU): Kraev,A.S.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (07-SEP-1995) A.S. Kraev, Swiss Federal
Institute of Technology, Laboratory of Biochemistry
III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

```

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..431	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /cell-line="WI38" /cell-type="fibroblast"

gene 112..242 /clone-lib="Stratagene #946204"
 exon 112..242 /gene="ncx1"
 /gene="ncx1"
 /number=9
 /usedin=X92368:RNA
 /label=ex9

SEQUENCE (SEQ):

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1 cttagtaggt cattagggct tccttcctcc ttggctttct tatggcagga tccagggatt
61 tccaaattaa acagaacaca gtgctcactt tctgatactt ccgtttcaca gacgaatatg
121 atgacaagca gccactgacc agcaaagagg aagaggagag gcgcattgca gaaatggggc
181 gccccatcct gggagagcac accaagttagg aagtgatcat tgaagaatcc tatgaattca
241 aggtatgctc accaactactg cccaccagga gccagtctca ccttgggaca gaaactgttc
301 ataggggttg ccaaagctta agatccacct ggaaagagta gtagatgtaa ttccaggaac
361 tggcttgtga attgagagcc tttggggcca aattggaatt atagagttaa tcaggaacca
421 aggagtctctg t

```

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LOCUS (LOC): HSNCX11 GenBank (R)
 GenBank ACC. NO. (GBN): X92368
 GenBank VERSION (VER): X92368.1 GI:1061130
 CAS REGISTRY NO. (RN): 170612-17-6
 SEQUENCE LENGTH (SQL): 390
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 24 Nov 2000
 DEFINITION (DEF): H.sapiens ncx1 gene (exon 1).
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 73 a 85 c 121 g 111 t

REFERENCE:
 1
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): Molecular biological studies of the cardiac
 sodium - ***calcium*** ***exchanger***
 JOURNAL (SO): Ann. N. Y. Acad. Sci., 779, 103-109 (***1996***)
 OTHER SOURCE (OS): CA 125:134211

REFERENCE:
 2 (bases 1 to 390)
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger
 JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114

REFERENCE:
 3 (bases 1 to 390)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (13-OCT-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, Switzerland

OTHER SOURCE (OS): CA 125:267114

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..390	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /clone="809 b 6" /clone-lib="CEPH megaYAC"
gene	join(1..128, X91213.1:108..1936, X91614.1:205..311, X91614.1:839..942, X91214.1:38..58, X91214.1:478..495, X91214.1:600..614, X91215.1:201..270, X91216.1:112..242, X91217.1:154..253, X91963.1:115..390,	/gene="ncx1"


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mRNA      join(1..128,      /gene="ncx1"
X91213.1:108..1936,
X91614.1:205..311,
X91614.1:839..942,
X91214.1:38..58,
X91214.1:478..495,
X91214.1:600..614,
X91215.1:201..270,
X91216.1:112..242,
X91217.1:154..253,
X91963.1:115..390,
X91647.1:58..3536)

                                     /product="sodium-calcium
                                     exchanger"
                                     /label=RNA
exon      1..128              /gene="ncx1"
                                     /number=1
                                     /label=ex1

SEQUENCE (SEQ):
  1 gcttcccaca gaagatggga gcgacctctt cctgatcggg agctgtttta aaggagggag
 61 tgcgccgtat tttctactag cgtggaggaa cggaggaaga atccattcac actccccaaa
121 ccaggtaggt tcttatgatg gcaggcagaa ggcatttagt cagagaccaa gaactatttt
181 ccatttgctg ctcataaggc tacacttccc tctgctttgg caaacgagcg gcttctaaat
241 ttgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgatgtggt gtgtgcgcgc
301 ctgcacattt ttctgggtgt ccgcgcttcc cagagtgaag ttgctcgggc tgggtgcgtct
361 gggcgtgagg gtgcctgcct gcctgccagt

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LOCUS (LOC):      HSNCX18      GenBank (R)
GenBank ACC. NO. (GBN): X91215
GenBank VERSION (VER): X91215.1  GI:1061137
CAS REGISTRY NO. (RN): 170612-16-5
SEQUENCE LENGTH (SQL): 381
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Primates
DATE (DATE):      24 Nov 2000
DEFINITION (DEF): H.sapiens ncx1 gene (exon 8).
SOURCE:           ***human***
  ORGANISM (ORGN): Homo sapiens
                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                  Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
                  Hominidae; Homo
NUCLEIC ACID COUNT (NA): 94 a   98 c   66 g   123 t
REFERENCE:
  1
  AUTHOR (AU):      Kraev,A.; Chumakov,I.; Carafoli,E.
  TITLE (TI):       The organization of the ***human*** gene NCX1
                  encoding the ***sodium*** - ***calcium***
                  ***exchanger***
  JOURNAL (SO):      Genomics, 37 (1), 105-112 ( ***1996*** )
  OTHER SOURCE (OS): CA 125:267114
REFERENCE:
  2 (bases 1 to 381)
  AUTHOR (AU):      Kraev,A.S.
  TITLE (TI):       Direct Submission
  JOURNAL (SO):      Submitted (07-SEP-1995) A.S. Kraev, Swiss Federal
                  Institute of Technology, Laboratory of Biochemistry
                  III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):
  Feature Key      Location      Qualifier
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source            1..381      /organism="Homo sapiens"
                  /db-xref="taxon:9606"
                  /chromosome="2"
                  /map="p21-23"
                  /cell-line="WI38"
                  /cell-type="fibroblast"
                  /tissue-type="lung"
                  /clone-lib="Stratagene #946204"
gene              201..270      /gene="ncx1"
exon              201..270      /gene="ncx1"
                  /number=8
                  /usedin=X92368:RNA
                  /label=ex8

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SEQUENCE (SEQ):

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1 agtgatcctc catcagtaac cttccaccag agctccttct gtgacctacc taggggtgac
61 ctatgatcat tgaatcccca aactaacgtt gcttgtgatg tgtgcatctg ggtgtgatgt
121 ttagcttact aattccacaa agctctgata gcaaatacatg caatccattc tgcctgatttt
181 tctgcctgtt cttttgctag gccaacctgt cttcaggaag gttcatgcta gagaacatcc
241 gattctctct actgtaatca ccattgccag gtactcattt catcatgatc cttgaaaacc
301 acagcctccc agagttcttt aatgttagag acattacagt catgcattta gccctctctc
361 tgtaaacatt gctaatatgc t

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LOCUS (LOC):

HSNCX1567 GenBank (R)

GenBank ACC. NO. (GBN): X91214

GenBank VERSION (VER): X91214.1 GI:1061136

CAS REGISTRY NO. (RN): 170612-15-4

SEQUENCE LENGTH (SQL): 800

MOLECULE TYPE (CI): DNA; linear

DIVISION CODE (CI): Primates

DATE (DATE): 24 Nov 2000

DEFINITION (DEF): H.sapiens ncx1 gene (exons 5, 6 and 7).

SOURCE: ***human***

ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 206 a 125 c 126 g 343 t

REFERENCE:

1
 AUTHOR (AU): Kraev, A.; Chumakov, I.; Carafoli, E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger

JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)

OTHER SOURCE (OS): CA 125:267114

REFERENCE: 2 (bases 1 to 800)

AUTHOR (AU): Kraev, A.S.

TITLE (TI): Direct Submission

JOURNAL (SO): Submitted (07-SEP-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..800	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /cell-line="WI38" /cell-type="fibroblast" /tissue-type="lung" /clone-lib="Statagene #946204"
gene	38..614	/gene="ncx1"
exon	38..58	/gene="ncx1" /number=5 /usedin=X92368:RNA
exon	478..495	/label=ex5 /gene="ncx1" /number=6 /usedin=X92368:RNA
exon	600..614	/label=ex6 /gene="ncx1" /number=7 /usedin=X92368:RNA /label=ex7

SEQUENCE (SEQ):

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1 ttaattctgt gtttgtcttt gtctgtttcc ttcacagccc tgttattgaa tgagcttggt
61 aagcatttca tttcttgcac ttccctttcca tttttctaga ttattttcca tttccgtcag
121 gtgatacagt agctctgtga cttttatttc tcttgacttg ctagcaagat tggtgttag
181 ggctattgac ctcatcttgc caaggtcaaa tagtttata tgcattttta atttagtaca
241 accttttgaa aaatcggtga tttcttaggt atgcacaaga attaaatttg tgcattaaat
301 ctcataatct taaaagaacg attagtgatt cagtcatgaa cattttccta gtcttcttaa
361 ttgtaaatat aatttggaac gtaccttggg tgggtgtgca ggcagtctga tgtcactggt
421 atttgttatg tagagtgtca aattataaca tttgttgttg ttttttttcc ttttttaggtg
481 gcttcacaat aacaggtatg aatttttcaa gtctaattgct atctaacttt tactgtctgt

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601 aaaatacctg tttggttaaga cttattttttt taatgtttcct tattttttccc caaataaccct
 661 taaccatcaa tccaaaccta catcttatgt aacttgcat aatatttaac tgtggcacat
 721 ggtgtcgtct tgctggtttt acacatttaa cgtttttacaa attaataatg tgtgtgtgtt
 781 gtgtttataa gctgttcata

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LOCUS (LOC): HSNCX134 GenBank (R)
 GenBank ACC. NO. (GBN): X91614
 GenBank VERSION (VER): X91614.1 GI:1061135
 CAS REGISTRY NO. (RN): 170612-14-3
 SEQUENCE LENGTH (SQL): 1468
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 24 Nov 2000
 DEFINITION (DEF): H.sapiens ncx1 gene (exons 3 & 4).
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 440 a 335 c 279 g 414 t
 REFERENCE: 1 (bases 1 to 1468)
 AUTHOR (AU): Kraev, A.; Chumakov, I.; Carafoli, E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger
 JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114
 REFERENCE: 2 (bases 1 to 1468)
 AUTHOR (AU): Kraev, A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (17-SEP-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetsstr. 16, Zurich, CH-8092, SWITZERLAND
 OTHER SOURCE (OS): CA 125:267114

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..1468	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /cell-line="WI38" /cell-type="fibroblast" /tissue-type="lung" /clone-lib="Stratagene #946204"
gene	205..942	/gene="ncx1"
exon	205..311	/gene="ncx1" /number=3 /usedin=X92368:RNA /label=ex3
exon	839..942	/gene="ncx1" /number=4 /usedin=X92368:RNA /label=ex4

SEQUENCE (SEQ):

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1  caggggagct atgcattggg tgaaatctct gatctttcat acctatctga taccattct
61  tgaagaaaaa actcacagta cagaagtttc tcgattactg tttgtctgaa agtgcagctg
121 gttaaccttg ctttcctctt ctctatgttc cttctcttct ctttcctctt ccccttggtc
181 gtcaatttct attctctgtt tcagcaaaac aatatcagtc aaggtaattg atgatgagga
241 gtatgagaaa aacaagacct tcttccttga gattggagag ccccgcttgg tggagatgag
301 tgagaagaaa ggtgggggag tctgtccagg gctgagccaa cagcttctgc tggcctgtgc
361 cacccttgga tgctgcact cttcagaaca tgacttacia tgcacacatc cctccaccta
421 tgtaacaggg cacagatctc atgctgagcc acagtaggca ggcctgtagc tacatcagcc
481 agcgtttagt gcgctgcatt aacgtctgag agattaattt tcagggcagt caatcaagca
541 tccatttctg ggaaagtgtg ctgagatgcc atgcaattgcc atgccaaaat accccaaaat
601 gggtagctac tgactgttaa ctgaagcggg aataattcgt gaaagtgata aattagcaaa
661 gaaaacttaa tgggggccag ccaagagtac ccaagatgcc cttttacata cttcaggagg
721 cccatgtgct gccagttctc cctccataac atcacagtaa cattcagctt ggtggacacc
781 aagagcatga gcgtgtgact ccaaccattt gttttgcctt tgtcttgtgt tcccacagga
841 agatcattac cattagaata tttgaccgtg aggaatatga gaaagagtgc agtttctccc
901 ttgtgcttga ggaacaaaaa tggataagaa gaggaatgaa aggtgtgaga gtaaacaag
  
```

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1021 ctctcctctt cctcggttcc caagtactat atttcattgc ctttgaagct ttagcaattt
1081 catttccttt ccctaattca caagtgcac aggcaacgcc cactttcttc aggaaatgcc
1141 aactaacctt gattgcaacc agatttaata acactgaaag ggattttctgt aattcagaaa
1201 tgattacata aaagaatgtg tttagttttt cactactcac gggtttattct aaaatgtcac
1261 tccaattatt aaatcttccc taaaatttta gtgataaaga cgacttaata cctcatcaat
1321 catacctcaa taaagctgga aaaaagaaac tgcttaatac ctattagtat tagtagatga
1381 ccctaattggc aactaacagg aaacttcaga attcaaataa ttaggcttct ttggagaaca
1441 cagtttaaaa atatttaata agaacaaa

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LOCUS (LOC):          HSNCX12          GenBank (R)
GenBank ACC. NO. (GBN): X91213
GenBank VERSION (VER): X91213.1 GI:1061134
CAS REGISTRY NO. (RN): 170612-13-2
SEQUENCE LENGTH (SQL): 2129
MOLECULE TYPE (CI):   DNA; linear
DIVISION CODE (CI):   Primates
DATE (DATE):          24 Nov 2000
DEFINITION (DEF):     H.sapiens ncx1 gene (exon 2).
SOURCE:               ***human***
  ORGANISM (ORGN):     Homo sapiens
                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                      Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
                      Hominidae; Homo
NUCLEIC ACID COUNT (NA): 590 a   381 c   523 g   635 t
REFERENCE:            1
  AUTHOR (AU):        Kraev,A.; Chumakov,I.; Carafoli,E.
  TITLE (TI):          The organization of the ***human*** gene NCX1
                      encoding the ***sodium*** - ***calcium***
                      ***exchanger***
  JOURNAL (SO):        Genomics, 37 (1), 105-112 ( ***1996*** )
  OTHER SOURCE (OS):   CA 125:267114
REFERENCE:            2 (bases 1 to 2129)
  AUTHOR (AU):        Kraev,A.S.
  TITLE (TI):          Direct Submission
  JOURNAL (SO):        Submitted (07-SEP-1995) A.S. Kraev, Swiss Federal
                      Institute of Technology, Laboratory of Biochemistry
                      III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

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Feature Key	Location	Qualifier
source	1..2129	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /cell-line="WI38" /cell-type="fibroblast" /tissue-type="lung" /clone-lib="Stratagene #946204"
gene	108..1936	/gene="ncx1"
exon	108..1936	/gene="ncx1" /number=2 /usedin=X92368:RNA /label=ex2

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SEQUENCE (SEQ):
1 aaatttttgggt aagagtaata aaaataagta attagtaatg ctttggctgc agctctaattg
61 acatgactttt ttttctgccc tctcccccac cttattttta ccagtagggt gtgacagttg
121 gaagtgtcat gtacaacatg cggcgattaa gtctttcacc caccttttca atgggatttc
181 atctgttagt tactgtgagt ctcttatttt cccatgtgga ccatgtaatt gctgagacag
241 aatggaagg agaaggaaat gaaactggtg aatgtactgg atcatattac tgtaagaaag
301 gggatgattt gccatttgg gaaccccaag acccttcttt tggggacaaa attgctagag
361 ctactgtgta ttttgtggcc atggtctaca gtcttcttgg agtctctatc atagctgac
421 ggttcatgtc ctctatagaa gtcatacacat ctcaagaaaa agaaataacc ataaagaaac
481 ccaatggaga gaccaccaag acaactgtga ggatctggaa tgaaacagtt tctaacctga
541 ccttgatggc cctgggatct tctgctcctg agattctcct ttcagtaatt gaagtgtgtg
601 gccataactt cactgcagga gacctcggtc ctagcaccat cgtgggaagt gctgcattca
661 atatgttcac cattattgca ctctgtgttt atgtgggtgcc tgacggagag acaaggaaga
721 ttaagcattt gcgtgtcttc tttgtgacag cagcctggag catctttgcc tacacctggc
781 ttacattat tttgtctgtc atatctcctg gtgttgtgga ggtctgggaa ggtttgccta
841 ctttcttctt ctttcccatc tgtgttgtgt tcgcttgggt agcggatagg agacttctgt
901 tttaacaagta tgtctacaag aggtatcgag ctggcaagca gagggggatg attattgaac
961 atgaaggaga caggccatct tctaagactg aaattgaaat ggacgggaaa gtggtcaatt

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1081 atgatgaaga agctaggcga gaaatggcta ggattctgaa ggaacttaag cagaagcatc
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1201 aaaaaagtag agcattttat cgcattcaag ctactcgcct catgactgga gctggcaaca
1261 ttttaagag gcatgcagct gaccaagcaa ggaaggctgt cagcatgcac gaggtcaaca
1321 ctgaagtgcac tgaaaatgac cctgttagta agatcttctt tgaacaaggg acatatcagt
1381 gtctggagaa ctgtggtact gtggccctta ccattatccg cagaggtggg gatttgacta
1441 acactgtgtt tgttgacttc agaacagagg atggcacagc aaatgctggg tctgattatg
1501 aattttactga aggaactgtg gtgtttaagc ctggtgatac ccagaaggaa atcagagtgg
1561 gtatcataga tgatgatatc tttgaggagg atgaaaattt ccttgtgcat ctcagcaatg
1621 tcaaagtatc ttctgaagct tcagaagatg gcatactgga agccaatcat gtttctacac
1681 ttgcttgctt cggatctccc tccactgcca ctgtaactat ttttgatgat gaccacgcag
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1801 tgaaagtatt gagaacatct ggagctcgag gaaatgttat cgttccatat aaaaccatcg
1861 aagggactgc cagaggtgga ggggaggatt ttgaggacac ttgtggagag ctcgaattcc
1921 agaatgatga aattgtgtaa gttctatatt atatatgtgt gtgtgtgtgt gtgtgtgtgt
1981 ggttcagtgt gtttatgaat gtgagtcctg gcatactttt ttaaattaaa tagcatgcaa
2041 ggaatggaat agcttttata caagatccct ttcaagatat cagtctttgc ttgggtgcca
2101 gttatcaata tgctctgcac acagagatc

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L4 ANSWER 259 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSNCX112 GenBank (R)
 GenBank ACC. NO. (GBN): X91647
 GenBank VERSION (VER): X91647.1 GI:1061133
 CAS REGISTRY NO. (RN): 170612-12-1
 SEQUENCE LENGTH (SQL): 3777
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 24 Nov 2000
 DEFINITION (DEF): H.sapiens ncx1 gene (exon 12).
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 1078 a 753 c 726 g 1220 t

REFERENCE: 1
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger
 JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114
 REFERENCE: 2 (bases 1 to 3777)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (19-SEP-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetsstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..3777	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /cell-line="WI38" /cell-type="fibroblast" /tissue-type="lung" /clone-lib="Stratagene #946204"
gene	58..3536	/gene="ncx1"
exon	58..3536	/gene="ncx1" /number=12 /usedin=X92368:RNA /label=ex12
variation	2718	/gene="ncx1"
variation	3012..3013	/replace="c" /gene="ncx1"
variation	3129	/replace="t" /gene="ncx1"
polyA-signal	3519..3524	/replace="t" /gene="ncx1"
polyA-site	3537	
variation	3589..3591	/replace="ta"

SEQUENCE (SEQ):

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1 ctccaaagac atctctaaaa gattgagtgt cattgacttt ctcttcttcc tctgcagaca
61 catttgccag caaagtggca gccacccagg accagtatgc agacgcctcc ataggtaacg
121 tcacgggcag caacgcggtg aatgtcttcc tgggaatcgg tgtggcctgg tccatcgctg
181 ccatctacca cgcagccaat ggggaacagt tcaaagtgtc ccctggcaca ctagctttct
241 ctgtcactct cttcaccatt ttgtctttca tcaatgtggg ggtgctgctg tatcggcgga
301 ggccagaaat cggaggtgag ctgggtgggc cccggactgc caagctcttc acatcctgcc
361 tctttgtgct cctatggctc ttgtacatct tcttctcttc cctggaggcc tactgccaca
421 taaaaggctt ctaaagggaac tatcagatat agtaaattta tatatatata tatatatata
481 taaaaattat gtataatgga cagaggaaac tgacatttgt catgttcact tacctgctga
541 tggaaatccag cttcaagagc atactctgta ctagggccga agtaaaaaac catcacctcc
601 cattcccagg ggcatacatc tgttcaacaa ggcattggag cagggcatct ctgcagctca
661 gtctagaagg gctgcactct ctccagggtg ataaatcctt aaggctttga tttgttttgt
721 ttttggtttt gttttcagtg gagctgggga ggtagttaat gtttggcttt atttttgtta
781 ttttggtttt ttttggtttt ttgggagagt cagggttgtt gcttttcttt gtggaaagtg
841 aaaccatcca aatgtaaatg ggttttggtt aaaatttaaa tcattagtat tccccctcac
901 ctcccccaat cacttaaaaa tatttttggt taagaaaaaa ctgggcatgg aagaagaaag
961 aagcatgtct tcatcgtatt accaaagtct agtcttatct cgggaatgtg agtggaagtg
1021 aagctgcctc caagaagaag cataaaagtg gaattggagc aggaaatccg atggttctag
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1201 ctgtgatttg caaggtcctt cttccagcat tcagcccagc taagccccc aagtggccat
1261 cccaaccctg ttctcctgtt ccacttgcca tcccctatgc aaacagtaag aataacccca
1321 ttcaaaaagc acatcatcgt ttccatttgg cattaacatg tgtctcagtc catagtgtgc
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1501 tacctgttac acagtgcatt gtgaaaaaca aataaaacaa aacaaagagt atctgtatat
1561 agtagagtat agtacatact gttctcccat ttggcaatgt tgattggaca ttgaagacat
1621 aagtgaagttt tcttttcacc tgagtgtgta ctittgtgct gttattgagt ttgattaatt
1681 actagggata aaaggagaaa atggattatt ttccacggtt ctgcacattc atttctaaga
1741 agcaataact gtcattgtgg gagaagttaa agctattgag aggatagcag gcaaactaca
1801 aagatcttca tggaaaatta gccatgtgga acacatcaga ggcctctaaa aatcacccat
1861 taattcagga aggccaaagga gaaaggcctt atagagacgt tgatatgttg gatgtgccta
1921 ggcttttcaga gccacccttt ccacaacacc cctccctgca aagtatttat ttcacatctg
1981 cactgtctgg cacagatggg agatagtgtt ggtttgttca ttttattttt ttacttaaaa
2041 ggctattttt agccctgttt ctttactgtt ccagtctagt cctctttgat tatatcagta
2101 gttgctgagt aagaaagaag ccagggtgac caacgggcct ttaaaagtgt tgtctcctct
2161 acttatgctg aaagagaagg caattaaata agactagtac ctcccaggag gattggactg
2221 ggatattttt aaccctttta aaagaatagc tgtttctatg ttaaaatacc aaagaacatg
2281 gataaaccca acattccaaa gtagtgcagc cactaatgag aaaaataata gaatgacttt
2341 ggtcaacctc tcggagactt ctgtgtctat aaggaatccc aggctggaga cattctagc
2401 cctctgtatt gattcaaaaa tacttaataa attaaagctg ttgagactta tttttcttcc
2461 tgtcactcag taaccatgat ccttctctcat ttaataaaca tttgggtgact gaatgagtaa
2521 ttaaatgctg gttaccact taatgtgcc ggtagtatga tactttctgg ggactaagcc
2581 atgaacaaaa cagtctagat ccctgccctc agaagggtta cagtttatgt gattactatt
2641 ttcatgagta aaagtgaaga aagccatatg gaaagatttt tatcttgcaa gaaaaacaa
2701 ttatgaaact cttttaagat aaacacactg aaactgtatc aaagcaattg tccaattgt
2761 atttataccc aagaatttct ttaactaaga gagcataagg catatgtttg gaaaaccacc
2821 ctctttatct ttgaccggtt tgcagataaa tatatctctc cattttaaac caagaagggc
2881 aatcatgttg gtgatccaga tcaactgagaa agcccagtg atcccatctt ttatctttgt
2941 tggcaatgga acttttctat ggcccacact ttacaattct ttgtcattct aacctatcct
3001 tcccactctt attttttttt tttttgagaa ttgtctaaat gaaagctagc ctagaagcac
3061 caagtaataa tattcaagga atataagttg ttttaacatt agaaaaattt ttgcactcat
3121 tttttagcag tattaggaat gtcaataatc ctgtagcaaa ttttcacaga gaactttaag
3181 aaattcttgc attggctgat ttcaatttga aagctttttg gtttgtttgc tttttaaat
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3661 cagaatattt gtctgtccta cagtgtgag atatatgttg gacattcttc catttcactg
3721 atttttttta cgttgcttag tatgactcta tctacatcct ttcctgcac caggatc
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L4 ANSWER 260 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSNCX111 GenBank (R)
GenBank ACC. NO. (GBN): X91963
GenBank VERSION (VER): X91963.1 GI:1061132
CAS REGISTRY NO. (RN): 170612-11-0
SEQUENCE LENGTH (SQL): 399
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 24 Nov 2000

SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 87 a 93 c 109 g 110 t
 REFERENCE: 1 (bases 1 to 399)
 AUTHOR (AU): Kraev, A.; Chumakov, I.; Carafoli, E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger

JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114

REFERENCE: 2 (bases 1 to 399)
 AUTHOR (AU): Kraev, A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (04-OCT-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetsstr. 16, Zurich, CH-8092, SWITZERLAND

OTHER SOURCE (OS): CA 125:267114

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..399	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /clone="809 b 6" /clone-lib="CEPH megaYAC"
gene	115..390	/gene="ncx1"
exon	115..390	/gene="ncx1" /number=11 /usedin=X92368:RNA /label=ex11

SEQUENCE (SEQ):

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121 atgatgacga cgtatgaatgt ggggaagaga agctgccctc ctgtttcgat tacgtgatgc
181 actttctgac tgtgttcttg aaggtcctgt ttgccttcgt cccccctact gaatactgga
241 atggctgggc gtgtttcatt gtctccatcc tcatgattgg cctactgaca gctttcattg
301 gagacctggc ttcccaacttt ggctgcacca ttggcctgaa agattctgtg actgcagtcg
361 tgttcgtcgc acttggaaca tcagtgccag gtacaaatt
  
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L4 ANSWER 261 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSNCX110 GenBank (R)
 GenBank ACC. NO. (GBN): X91217
 GenBank VERSION (VER): X91217.1 GI:1061131
 CAS REGISTRY NO. (RN): 170612-10-9
 SEQUENCE LENGTH (SQL): 602
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 24 Nov 2000
 DEFINITION (DEF): H.sapiens ncx1 gene (exon 10).
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 184 a 115 c 112 g 191 t
 REFERENCE: 1
 AUTHOR (AU): Kraev, A.; Chumakov, I.; Carafoli, E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger

JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114

REFERENCE: 2 (bases 1 to 602)
 AUTHOR (AU): Kraev, A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (07-SEP-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):		
Feature Key	Location	Qualifier
source	1..602	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="p21-23" /cell-line="WI38" /cell-type="fibroblast" /tissue-type="lung" /clone-lib="Statagene #946204"
gene	154..253	/gene="ncx1"
exon	154..253	/gene="ncx1" /number=10 /usedin=X92368:RNA /label=ex10

SEQUENCE (SEQ):

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1 ataatcataa cagtgtttga tgtcaatact attatatttga gcctaacatc tgctaccttt
61 atataactct ggagtttcaa aatcaacaag gtcttggatt tcctgaggcc ttagcgaacc
121 cagcatttat atttttcttt tcaacatttc tagagtactg tggacaaact cattaagaag
181 acaaacctgg cccttgtggt tgggactaac agctggagag aacagttcat tgaagctatc
241 actgtcagtg ctggtgagtg cctttctctg catattataa attaaaattg cccaatctga
301 gctgagtttt cctactgtgg ctacttggtc tatggcaaag caccaaaggg cttccatggc
361 aaaattaagg gagaaataag tttatttgtt aatgtatgca catttttaaag actaaattga
421 ctatctagat gaagcaaata tcttcacaca tgacattttc ctccatctat attgcatctt
481 tctggaaata gacaagataa atttaaagcg ttttgtgtct ctaattcacg aatagccaat
541 cactaggctt tgtctggaaa attccctgta agcagcacaa aggtggccaa gtcaagggtca
601 ag

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L4 ANSWER 262 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): CENACAEX GenBank (R)
 GenBank ACC. NO. (GBN): X91803
 GenBank VERSION (VER): X91803.1 GI:2826758
 CAS REGISTRY NO. (RN): 169791-31-5
 SEQUENCE LENGTH (SQL): 2844
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Invertebrates
 DATE (DATE): 3 Nov 2000
 DEFINITION (DEF): C.elegans mRNA for protein similar to vertebrate Na/Ca exchanger (CE-NCX1).
 SOURCE: Caenorhabditis elegans.
 ORGANISM (ORGN): Caenorhabditis elegans
 Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
 Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis

NUCLEIC ACID COUNT (NA): 777 a 606 c 675 g 786 t

COMMENT:

On Jan 31, 1998 this sequence version replaced gi:1009383.

REFERENCE: 1 (bases 1 to 2439)
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): Molecular biological studies of the cardiac
 sodium - ***calcium*** ***exchanger***
 JOURNAL (SO): Ann. N. Y. Acad. Sci., 779, 103-109 (***1996***)
 OTHER SOURCE (OS): CA 125:134211

REFERENCE: 2 (bases 406 to 2844)
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger
 JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:134211

REFERENCE: 3 (bases 1 to 2844)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (25-SEP-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND

FEATURES (FEAT):		
Feature Key	Location	Qualifier
source	1..2844	/organism="Caenorhabditis elegans" /strain="Bristol N2" /db-xref="taxon:6239"

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/note="RACE product, 1-405;
trans-spliced leader SL-1,1-22"
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/product="sodium-calcium
exchanger"
/protein-id="CAA62913.1"
/db-xref="GI:2826759"
/db-xref="SPTREMBL:Q21609"
/translation="MTKLKIYLFVLSLTTLGQY
AAEPQNGEIIHVSSQRIPGPEPAC
APAKPCSPGVIVPVWQPSNLSECKIWFRAIVYL
IALAYLFFGVSIADRFMASIEVI
TSQOKSVKMKKITGEHFTIMVRVWNETVSNLTLM
ALGSSAPEILLSVIEICGNNFEAG
ELGPSTIVGSAAFNLFIIIAVCIMAIPNGETRVR
QHNGVFWVTVVWSTFAYVWLYLIL
SVFSPGEVEVWEGVLTFFVFFPLTVGSAYFADAHA
GQFGQRLISGPLSSFVRRSPRRSP
SKKTRENVENGAGLPGDATQNLIGGDADALAFEI
HRRHYLDIFKQLRSEHPDAPVVEL
EKHAMEKVVGGEQKKSRAFYRIQTTRKMIGSGDIQ
KKLKKSINKLEPMVVQKTMATVEFD
PPHYTCLENVGDVYLTVKCDRGSVPEDTTVTVHY
RTIADTAQAESDFVHTEGTITFEP
GQTEQKIKVGIVDNDIYEDDEQFMVRLSQVRAFR
SEHFSSVPARLGLAATATVIVDD
DHAGSFGFLSEKFKCTESCGSFVAEIVIRSRGARG
KVSIPYKTVDGAAKSPQDYEHQEG
VLKFADEQSKAEIYIPIVNDDEYEKHEFDYIELG
EPIWHRELADDEEGIEGKPILGFS
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KQQFTEAWTLEPEEEDGEVTTMEK
VMHYIALPWKLLFALIPPTDYFNGWLCFVVAIAM
IGLLTAFIGDIAAAFAGCTVGLKDS
VTALLVAMGTSLPDTFASRTAAVGDQWADGSIG
NVTGSNAVNVFLGIGIAWMIAACV
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IFVSVWLLYILLSTLEAYCIIKGF"

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SEQUENCE (SEQ):

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121	gaaataattc	acgtatcttc	ccaacgtata	cccgggcttg	agccggcttg	tgctccggct
181	aagccatggt	cccccgaggt	tatcgtacca	gtttggcagc	catcggaaaa	cctgtcagaa
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421	gaaacagtca	gtaacctgac	gctaattggt	ctcggatcct	cagcccccga	gattttgctc
481	tcggtcattg	aaattttgcg	aaataatttc	gaagctggag	agctgggacc	atcgacaatt
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601	aacggcgaga	cccgctcgagt	acaacataat	ggtgtgttct	gggttactgt	agtttgggtc
661	acatttgcat	acgtctggct	ttacctaatc	ctgagtgtgt	tcagtcgggg	agaagttgaa
721	gtatgggagg	gtgtgctcac	ttttgtgttt	ttcccgttaa	ctgtgggcag	tgccctactt
781	gccgatgcac	atgctgggca	attcgggtcag	agactaatct	ccggacccct	ctcctcggtc
841	gtaaggaggt	caccacgccg	ttctccgtcc	aaaaaaaacc	gggaaaacgt	ggaaaatgga
901	gccggactcc	caggggatgc	aactcaaaat	ttgataggag	gagacgccga	cgccctggca
961	tttgaaattc	acagacgtca	ctacctggat	attttcaaac	aattgagatc	ggagcatcca
1021	gatgctccag	tcgttgaact	tgagaagcat	gccatggaga	aagttgtcgg	agagcagaag
1081	aatcaagag	ctttttatag	aattcagaca	actaggaaaa	tgatcggtag	tgagatattt
1141	cagaaaaaat	tgaagaaaaa	taataaactg	gagccaatgg	ttgttcaaaa	aaccatggcc
1201	accgtggagt	tcgaccctcc	tcaactatac	tgtctggaga	atgttgggtg	cgtgtacctc
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1321	actattgctg	ataccgctca	agctgaatcc	gactttgtgc	acaccgaagg	aacaatcact
1381	tttgagccag	gacagactga	acaaaaaatc	aaagtcggaa	ttgtggacaa	cgacatctac
1441	gaggacgacg	agcagttcat	ggtccggctc	tcacaagtcc	gagccttccg	ttcagagcac
1501	ttttcccatg	tgccggctcg	gctgggtctc	gcagcgacag	ctaccgtaat	cattgtggac
1561	gatgatcatg	ctggaagctt	tggcttcttg	tcagaaaaat	tcaaatgcac	agagtcatgt
1621	ggctcatttg	tggcagaagt	tatacgggtc	cgtggagccc	gtggttaagg	gtcaattcct
1681	tataagactg	ttgatggagc	cgccaaatcg	ccacaggact	atgagcatca	ggagggtgtg
1741	ctgaagtttg	ccgatgagca	gtctaaagcc	gaaatctaca	ttccgattgt	caacgatgat
1801	gaatatgaaa	aacacgaaga	tttctatatt	gagctcggtg	agcccatgtg	gcacagggaa

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1921 gtagtgtatca cagaagaccg agaattcaag aattttatgg atagagcatt ggtaacagcg
1981 aatacctcga ttatggtcgg aacttcgagt tggaagcaac aattcactga agcctggact
2041 ttggagccgg aggaggagga cggagaagtc acgactatgg aaaaagttat gcattatatt
2101 gcattaccat ggaagctact gtttgccctg attccaccga ctgactattt taatggttgg
2161 ctatgttttg tgggtgcaat tgcgatgatt ggactattaa ccgcatttat tgggtgatatc
2221 gctgcagctt ttgggtgtac agttgggcta aaggactctg tgaccgccct caccttggtc
2281 gcaatgggaa cttctcttcc agacacattt gcgctccgca ccgccgcagt tggagatcaa
2341 tgggctgacg gatcgattgg taatgtgact ggaagtaatg ctgttaaatgt attcttgggt
2401 attggaattg cctggatgat tgctgcctgt gtacatgcct accggggtac caagttttta
2461 gtcgccacag gctccttggc cttctcggta acaatgttcc taattggctc agtcgtatgt
2521 gtcgccttac tccaatatcg tcgtttcaat cgaaaagtca acggagagtt aggcggtcca
2581 atgggctggc ggatcatttc cgcgggaatt ttcgtctccg tttggctttt gtatatcctg
2641 ctacgacacac tagaggccta ttgtattatt aagggtattc aattttaatt ttttctttaa
2701 tttttcaaaa atttctaaat tttctcaaaa gccataattt cccaattttt cacctaaaaa
2761 tcaaagaatc aatactacaa actacattcc cgtgtctttt acttttatac atcaatcaat
2821 caatcaataa ataataaaac attt

```

L4 ANSWER 263 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): HSNCX1 GenBank (R)
 GenBank ACC. NO. (GBN): X91221
 GenBank VERSION (VER): X91221.1 GI:987078
 CAS REGISTRY NO. (RN): 168878-73-7
 SEQUENCE LENGTH (SQL): 591
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Primates
 DATE (DATE): 24 Nov 2000
 DEFINITION (DEF): H.sapiens mRNA for NCX1 protein 3'UTR.
 SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 168 a 86 c 96 g 241 t
 REFERENCE: 1 (bases 1 to 591)
 AUTHOR (AU): Kraev,A.; Chumakov,I.; Carafoli,E.
 TITLE (TI): The organization of the ***human*** gene NCX1
 encoding the ***sodium*** - ***calcium***
 exchanger
 JOURNAL (SO): Genomics, 37 (1), 105-112 (***1996***)
 OTHER SOURCE (OS): CA 125:267114
 REFERENCE: 2 (bases 1 to 591)
 AUTHOR (AU): Kraev,A.S.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (31-AUG-1995) A.S. Kraev, Swiss Federal
 Institute of Technology, Laboratory of Biochemistry
 III, Universitaetstr. 16, Zurich, CH-8092, SWITZERLAND
 OTHER SOURCE (OS): CA 125:267114

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..591	/organism="Homo sapiens" /db-xref="taxon:9606" /map="2p22-p23" /clone="141435" /tissue-type="placenta" /clone-lib="Soares Placenta Nb2HP"
gene	1..591	/gene="NCX1"
3'UTR	1..591	/gene="NCX1"
polyA-signal	574..579	/gene="NCX1"

SEQUENCE (SEQ):

```

1  tggaactttt ctatggccca cactttacaa ttctttgtca ttctaacca tccttcccat
61  ccttattttt tttttttttg agaattgcta aatggaaagc tagcctagaa gcaccaagta
121 aatatattca aggaatataa gttgttttaa cattagaaaa atttttgcac tcatttttta
181 gctgtattag gaatgtcaat aatcctgtag caaattttca cagagaactt taagaaattc
241 ttgcattggc cgatttcaat ttgaaagctt tttggtttgt ttgcttttta aattttcatg
301 ttctaggaaa ctatgattct ggttgttcag gattgttatt attatagtgt tgtaaaatta
361 tttttatttg tgtgtattgt gcacagcttg gggggggggc gggaaatgca ctaattgtgc
421 tcttccttat aaatggtaca taccactgac acagacaaat aaagtttcta attgtttctg
481 atttaatcac tagtgatata gcataattct tatgaaatgt tttctccttt ctcatgtgca
541 tctacttcat tttttgtttt catgttttga agaaataaaa accaaaatgg t

```

L4 ANSWER 264 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): T19755 GenBank (R)
 GenBank ACC. NO. (GBN): T19755
 GenBank VERSION (VER): T19755.1 GI:597500
 CAS REGISTRY NO. (RN): 160365-54-8
 SEQUENCE LENGTH (SQL): 211
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Expressed sequence tag
 DATE (DATE): 28 Nov 1994
 DEFINITION (DEF): 957R Heart Homo sapiens cDNA clone 957 similar to
 Sodium / ***calcium*** ***exchanger*** ,
 mRNA sequence.

SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 41 a 54 c 66 g 49 t 1 others

COMMENT:

Other ESTs: 957F
 Contact: Liew CC
 Brigham and Women's Hospital
 Harvard Medical School
 75 Francis St. Boston, MA-02115, USA
 Tel: 6177328915
 Fax: 6179750995
 Email: cliew@rics.bwh.harvard.edu
 Seq primer: GACACCAGACCAACTGGTAATG.

REFERENCE: 1 (bases 1 to 211)
 AUTHOR (AU): Liew, C.C.; Hwang, D.M.; Fung, Y.W.; Laurensen, C.;
 Cukerman, E.; Tsui, S.Y.; Lee, C.Y.
 TITLE (TI): A catalogue of genes in the cardiovascular system as
 identified by expressed sequence tags
 JOURNAL (SO): Proc. Natl. Acad. Sci. U.S.A., 91, 10645-10649 (
 1994)
 OTHER SOURCE (OS): CA 122:2521

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..211	/organism="Homo sapiens" /db-xref="taxon:9606" /clone="957" /clone-lib="Heart" /lab-host="E.coli Y1090" /note="Vector: Lambda gt11; Site-1: EcoRI; Site-2: EcoRI"

SEQUENCE (SEQ):

1 cgagagaaag ctagtgtgcc aggggacact ttgaastggt cccattggc tgcgtggtag
 61 atggcagcga tgggccaggc cacaccgatt cccaggaaga cattcaccgc gttgctgccc
 121 gtgacgttac ctatggaggc gtctgcatac tggctcctggg tggctgccac tttgctggca
 181 aatgtgtctg gcaactgatgt tccaagtgcg a

L4 ANSWER 265 OF 473 GENBANK.RTM. COPYRIGHT 2004 on STN

LOCUS (LOC): T19754 GenBank (R)
 GenBank ACC. NO. (GBN): T19754
 GenBank VERSION (VER): T19754.1 GI:597499
 CAS REGISTRY NO. (RN): 160365-53-7
 SEQUENCE LENGTH (SQL): 261
 MOLECULE TYPE (CI): mRNA; linear
 DIVISION CODE (CI): Expressed sequence tag
 DATE (DATE): 28 Nov 1994
 DEFINITION (DEF): 957F Heart Homo sapiens cDNA clone 957 similar to
 Sodium / ***calcium*** ***exchanger*** ,
 mRNA sequence.

SOURCE: ***human***
 ORGANISM (ORGN): Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 68 a 53 c 68 g 71 t 1 others

COMMENT:

Other ESTs: 957R
 Contact: Liew CC

Harvard Medical School
75 Francis St. Boston, MA 02115, USA
Tel: 6177328915
Fax: 6179750995
Email: cliew@rics.bwh.harvard.edu
Seq primer: GGTGGCGACGACTCCTGGAGCC.

REFERENCE: 1 (bases 1 to 261)
AUTHOR (AU): Liew, C.C.; Hwang, D.M.; Fung, Y.W.; Laurensen, C.;
Cukerman, E.; Tsui, S.Y.; Lee, C.Y.
TITLE (TI): A catalogue of genes in the cardiovascular system as
identified by expressed sequence tags
JOURNAL (SO): Proc. Natl. Acad. Sci. U.S.A., 91, 10645-10649 (
1994)
OTHER SOURCE (OS): CA 122:2521

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..261	/organism="Homo sapiens" /db-xref="taxon:9606" /clone="957" /clone-lib="Heart" /lab-host="E.coli Y1090" /note="Vector: Lambda gt11; Site-1: EcoRI; Site-2: EcoRI"

SEQUENCE (SEQ):

```
1 atcattgaag aatcctatga attcaagagt actgtggaca aactcattaa gaagacaaac
61 ctggcccttg tggttgggac taacagctgg agagaacagt tcattgaagc tatcactgtc
121 agtvctgggg aagatgatga cgacgatgaa tgtggggaag agaagctgcc ctctgtttc
181 gattacgtga tgcactttct gactgtgttc tggaagggtc tgtttgcctt cgtcccccct
241 acttaatact ggaatggctg g
```

L4 ANSWER 266 OF 473 MEDLINE on STN
AN 2002303597 MEDLINE
DN PubMed ID: 12045895
TI Extracellular ATP effects on calcium signaling in cultured ***human***
non-pigmented ciliary body epithelium.
AU Cullinane A B; Coca-Prados M; Harvey B J
CS Wellcome Trust Cellular Physiology Research Unit, Department of
Physiology, National University of Ireland, Cork, Ireland..
abcullinane@hotmail.com
NC EY-04873 (NEI)
SO Current eye research, *** (2001 Dec) *** 23 (6) 448-54.
Journal code: 8104312. ISSN: 0271-3683.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200207
ED Entered STN: 20020605
Last Updated on STN: 20020709
Entered Medline: 20020708

L4 ANSWER 267 OF 473 MEDLINE on STN
AN 2002161303 MEDLINE
DN PubMed ID: 11892938
TI KB-R7943. Kanebo.
AU Billman G E
CS Ohio State University, Columbus 43210, USA.. billman.1@pop.service.ohio-
state.edu
SO Current opinion in investigational drugs (London, England : 2000),
*** (2001 Dec) *** 2 (12) 1740-5. Ref: 40
Journal code: 100965718. ISSN: 1472-4472.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200208
ED Entered STN: 20020315
Last Updated on STN: 20020830
Entered Medline: 20020829

AN 2002066545 MEDLINE
DN PubMed ID: 11793976
TI Sodium-calcium exchange in platelets of diabetics.
AU Bose R; Li Y; Woo V
CS Dept. of Pharmacology, Dept. of Internal Medicine, University of Manitoba,
Winnipeg, Manitoba R3W OW3, Canada.
SO Proceedings of the Western Pharmacology Society, *** (2001) *** 44
183-4.
Journal code: 7505899. ISSN: 0083-8969.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200207
ED Entered STN: 20020125
Last Updated on STN: 20020703
Entered Medline: 20020702

L4 ANSWER 269 OF 473 MEDLINE on STN
AN 2002005301 MEDLINE
DN PubMed ID: 11121788
TI How can overexpression of Na(+), Ca(2+)-exchanger compensate the negative
inotropic effects of downregulated SERCA?
CM Comment on: Cardiovasc Res. 2001 Jan;49(1):38-47. PubMed ID: 11121794
Comment in: Cardiovasc Res. 2001 Apr;50(1):167-9. PubMed ID: 11345943
AU Isenberg G
SO Cardiovascular research, *** (2001 Jan) *** 49 (1) 1-6. Ref: 14
Journal code: 0077427. ISSN: 0008-6363.
CY Netherlands
DT Commentary
Editorial
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200203
ED Entered STN: 20020121
Last Updated on STN: 20020313
Entered Medline: 20020312

L4 ANSWER 270 OF 473 MEDLINE on STN
AN 2001697034 MEDLINE
DN PubMed ID: 11746521
TI Hypoxia-induced increase in intracellular calcium concentration in
endothelial cells: role of the Na(+)-glucose cotransporter.
AU Berna N; Arnould T; Remacle J; Michiels C
CS Laboratoire de Biochimie et Biologie Cellulaire, Facultes Universitaires
Notre-Dame de la Paix, 61, rue de Bruxelles, B-5000 Namur, Belgium.
SO Journal of cellular biochemistry, *** (2001) *** 84 (1) 115-31.
Journal code: 8205768. ISSN: 0730-2312.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200203
ED Entered STN: 20011218
Last Updated on STN: 20020314
Entered Medline: 20020313

L4 ANSWER 271 OF 473 MEDLINE on STN
AN 2001692115 MEDLINE
DN PubMed ID: 11735253
TI Reperfusion arrhythmias: new insights into the role of the Na(+)/Ca(2+)
exchanger.
CM Comment on: J Mol Cell Cardiol. 2001 Oct;33(10):1861-9. PubMed ID:
11603927
AU Van Wagoner D R; Bond M
SO Journal of molecular and cellular cardiology, *** (2001 Dec) *** 33 (12)
2071-4.
Journal code: 0262322. ISSN: 0022-2828.
CY England: United Kingdom
DT Commentary
Editorial
LA English
FS Priority Journals

ED Entered STN: 20011213
 Last Updated on STN: 20020413
 Entered Medline: 20020412

L4 ANSWER 272 OF 473 MEDLINE on STN
 AN 2001680091 MEDLINE
 DN PubMed ID: 11723027
 TI Ionic mechanism of delayed afterdepolarizations in ventricular cells isolated from ***human*** end-stage failing hearts.
 AU Verkerk A O; Veldkamp M W; Baartscheer A; Schumacher C A; Klopping C; van Ginneken A C; Ravesloot J H
 CS Department of Physiology, Experimental and Molecular Cardiology Group, Academic Medical Center, University of Amsterdam, The Netherlands.. a.o.verkerk@amc.uva.nl
 SO Circulation, *** (2001 Nov 27) *** 104 (22) 2728-33.
 Journal code: 0147763. ISSN: 1524-4539.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 200201
 ED Entered STN: 20011203
 Last Updated on STN: 20020201
 Entered Medline: 20020131

L4 ANSWER 273 OF 473 MEDLINE on STN
 AN 2001652037 MEDLINE
 DN PubMed ID: 11704553
 TI Localization of thiazide-sensitive Na(+)-Cl(-) cotransport and associated gene products in mouse DCT.
 CM Comment in: Am J Physiol Renal Physiol. 2001 Dec;281(6):F1019-20. PubMed ID: 11704551
 AU Campean V; Kricke J; Ellison D; Luft F C; Bachmann S
 CS Department of Anatomy, Medical Faculty of the Charite, Humboldt University, 13353 Berlin, Germany.
 SO American journal of physiology. Renal physiology, *** (2001 Dec) *** 281 (6) F1028-35.
 Journal code: 100901990. ISSN: 0363-6127.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200112
 ED Entered STN: 20011114
 Last Updated on STN: 20020123
 Entered Medline: 20011227

L4 ANSWER 274 OF 473 MEDLINE on STN
 AN 2001652036 MEDLINE
 DN PubMed ID: 11704552
 TI Distribution of transcellular calcium and sodium transport pathways along mouse distal nephron.
 CM Comment in: Am J Physiol Renal Physiol. 2001 Dec;281(6):F1019-20. PubMed ID: 11704551
 AU Loffing J; Loffing-Cueni D; Valderrabano V; Klausli L; Hebert S C; Rossier B C; Hoenderop J G; Bindels R J; Kaissling B
 CS Institute of Anatomy, University of Zurich, CH-8057 Zurich.. jloffing@anatol.unizh.ch
 SO American journal of physiology. Renal physiology, *** (2001 Dec) *** 281 (6) F1021-7.
 Journal code: 100901990. ISSN: 0363-6127.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200112
 ED Entered STN: 20011114
 Last Updated on STN: 20020123
 Entered Medline: 20011227

L4 ANSWER 275 OF 473 MEDLINE on STN
 AN 2001528012 MEDLINE
 DN PubMed ID: 11573936
 TI A disulfide bond is required for functional assembly of NCX1 from complementary fragments.

CS Department of Physiology, UCLA School of Medicine, Los Angeles, CA
90095-1760, USA.
NC HL49101 (NHLBI)
SO Biochemical and biophysical research communications, *** (2001 Oct 5) ***
287 (4) 825-8.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204

L4 ANSWER 276 OF 473 MEDLINE on STN
AN 2001518213 MEDLINE
DN PubMed ID: 11565424
TI [Calcium-transporting systems and calcium regulation in cardiomyocytes].
Kal'tsiittransportiruiushchie sistemy i reguliatsiia kontsentratsii
AU kal'tsiia v kardiomiotsitakh.
CS Aleksandrova E A
SO Volgograd State Pedagogical University.
Uspekhi fiziologicheskikh nauk, *** (2001 Jul-Sep) *** 32 (3) 40-8.
Ref: 100
Journal code: 0310750. ISSN: 0301-1798.
CY Russia: Russian Federation
DT Journal; Article; (JOURNAL ARTICLE)
LA General Review; (REVIEW)
FS (REVIEW, TUTORIAL)
EM Russian
ED Priority Journals
200112
Entered STN: 20010924
Last Updated on STN: 20020122
Entered Medline: 20011204

L4 ANSWER 277 OF 473 MEDLINE on STN
AN 2001511177 MEDLINE
DN PubMed ID: 11558150
TI Delayed apoptosis and its regulation in astrocytes.
AU Takuma K
CS Department of Analytical Chemistry, Faculty of Pharmaceutical Sciences,
Kobe Gakuin University, 518 Arise, Ikawadani-cho, Nishi-ku, Kobe 651-2180,
Japan.
SO Yakugaku zasshi. Journal of the Pharmaceutical Society of Japan,
*** (2001 Sep) *** 121 (9) 663-9. Ref: 49
Journal code: 0413613. ISSN: 0031-6903.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA General Review; (REVIEW)
FS (REVIEW, TUTORIAL)
EM Japanese
ED Priority Journals
200112
Entered STN: 20010918
Last Updated on STN: 20020122
Entered Medline: 20011204

L4 ANSWER 278 OF 473 MEDLINE on STN
AN 2001492633 MEDLINE
DN PubMed ID: 11534550
TI Abstracts of the American Physiological Society Conferences. Cellular and
Molecular Physiology of Sodium-Calcium Exchange, Banff, Alberta, Canada,
October 10-14, 2001. Genome and Hormones: An Integrative Approach to
Gender Differences in Physiology, Pittsburgh, Pennsylvania, USA, October
17-20, 2001.
AU Anonymous
SO Physiologist, *** (2001 Aug) *** 44 (4) 219-86.
Journal code: 0401143. ISSN: 0031-9376.
CY United States
DT Conference; Conference Article; (CONGRESSES)
LA (OVERALL)
FS English
Priority Journals

ED Entered STN: 20010906
 Last Updated on STN: 20010910
 Entered Medline: 20010906

L4 ANSWER 279 OF 473 MEDLINE on STN
 AN 2001480930 MEDLINE
 DN PubMed ID: 11524394
 TI Patients with end-stage congestive heart failure treated with
 beta-adrenergic receptor antagonists have improved ventricular myocyte
 calcium regulatory protein abundance.
 AU Kubo H; Margulies K B; Piacentino V 3rd; Gaughan J P; Houser S R
 CS Cardiovascular Research Group, Department of Physiology and Section of
 Cardiology, Temple University School of Medicine, Philadelphia, PA 19140,
 USA.
 NC AG-17022 (NIA)
 HL-03560 (NHLBI)
 HL-33921 (NHLBI)
 HL-61495 (NHLBI)
 SO Circulation, *** (2001 Aug 28)*** 104 (9) 1012-8.
 Journal code: 0147763. ISSN: 1524-4539.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 200109
 ED Entered STN: 20010830
 Last Updated on STN: 20010917
 Entered Medline: 20010913

L4 ANSWER 280 OF 473 MEDLINE on STN
 AN 2001444431 MEDLINE
 DN PubMed ID: 11054465
 TI Acquired delayed rectifier channelopathies: how heart disease and
 antiarrhythmic drugs mimic potentially-lethal congenital cardiac
 disorders.
 CM Comment on: Cardiovasc Res. 2000 Nov;48(2):300-9. PubMed ID: 11054476
 AU Nattel S
 SO Cardiovascular research, *** (2000 Nov)*** 48 (2) 188-90.
 Journal code: 0077427. ISSN: 0008-6363.
 CY Netherlands
 DT Commentary
 Editorial
 LA English
 FS Priority Journals
 EM 200109
 ED Entered STN: 20010813
 Last Updated on STN: 20011001
 Entered Medline: 20010927

L4 ANSWER 281 OF 473 MEDLINE on STN
 AN 2001420888 MEDLINE
 DN PubMed ID: 11470457
 TI Cardiac ***sodium*** - ***calcium*** ***exchanger*** : a
 double-edged sword.
 CM Comment on: Cardiovasc Res. 2001 Aug 1;51(2):241-50. PubMed ID: 11470463
 AU Conway S J; Koushik S V
 SO Cardiovascular research, *** (2001 Aug 1)*** 51 (2) 194-7. Ref: 44
 Journal code: 0077427. ISSN: 0008-6363.
 CY Netherlands
 DT Commentary
 Editorial
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200109
 ED Entered STN: 20011001
 Last Updated on STN: 20011001
 Entered Medline: 20010927

L4 ANSWER 282 OF 473 MEDLINE on STN
 AN 2001419684 MEDLINE
 DN PubMed ID: 11467418
 TI Evidence for mechanistic alterations of Ca²⁺ homeostasis in Type 2
 diabetes mellitus.

CS Center for Biotechnology, Anna University, Chennai, India.
 SO International journal of experimental diabetes research, *** (2001) ***
 1 (4) 275-87.
 Journal code: 100962067. ISSN: 1560-4284.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200108
 ED Entered STN: 20010813
 Last Updated on STN: 20010813
 Entered Medline: 20010809

L4 ANSWER 283 OF 473 MEDLINE on STN
 AN 2001405677 MEDLINE
 DN PubMed ID: 11456400
 TI Hypoxia delays the intracellular Ca²⁺ clearance by Na⁺-Ca²⁺ exchanger in
 human adult cardiac myocytes.
 AU Park S I; Park E J; Kim N H; Baek W K; Lee Y T; Lee C J; Suh C K
 CS Department of Physiology and Biophysics, Inha University College of
 Medicine, Incheon, Korea.
 SO Yonsei medical journal, *** (2001 Jun) *** 42 (3) 333-7.
 Journal code: 0414003. ISSN: 0513-5796.
 CY Korea (South)
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200108
 ED Entered STN: 20010820
 Last Updated on STN: 20010820
 Entered Medline: 20010816

L4 ANSWER 284 OF 473 MEDLINE on STN
 AN 2001387548 MEDLINE
 DN PubMed ID: 11443225
 TI Intracellular Ca²⁺ release sparks atrial pacemaker activity.
 AU Lipsius S L; Huser J; Blatter L A
 CS Department of Physiology, Stritch School of Medicine, Loyola University
 Chicago, Maywood, Illinois 60153, USA.
 SO News in physiological sciences : an international journal of physiology
 produced jointly by the International Union of Physiological Sciences and
 the American Physiological Society, *** (2001 Jun) *** 16 101-6. Ref:
 20
 Journal code: 8609378. ISSN: 0886-1714.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200107
 ED Entered STN: 20010730
 Last Updated on STN: 20010730
 Entered Medline: 20010726

L4 ANSWER 285 OF 473 MEDLINE on STN
 AN 2001366257 MEDLINE
 DN PubMed ID: 11426897
 TI Leucocyte intracellular pH and Na⁺/H⁺ exchanger isoform-1 activity in
 postpartum women with pre-eclampsia.
 AU Lee V M; Halligan A W; Ng L L
 CS Department of Medicine and Therapeutics, Leicester Royal Infirmary, UK.
 SO BJOG : an international journal of obstetrics and gynaecology, *** (2001*
 Jun) *** 108 (6) 615-22.
 Journal code: 100935741. ISSN: 1470-0328.
 CY England: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 200107
 ED Entered STN: 20010730
 Last Updated on STN: 20030304
 Entered Medline: 20010726

L4 ANSWER 286 OF 473 MEDLINE on STN

DN PubMed ID: 11412833
 TI Potent and selective inhibition of the ***human*** Na⁺/H⁺ exchanger isoform NHE1 by a novel aminoguanidine derivative T-162559.
 AU Kawamoto T; Kimura H; Kusumoto K; Fukumoto S; Shiraishi M; Watanabe T; Sawada H
 CS Discovery Research Laboratories IV, Pharmaceutical Discovery Research Division, Takeda Chemical Industries, Ltd., 17-85, Jusohonmachi 2-chome, Yodogawa-ku, 532-8686, Osaka, Japan.. Kawamoto Tomohiro@takeda.co.jp
 SO European journal of pharmacology, *** (2001 May 18) *** 420 (1) 1-8.
 Journal code: 1254354. ISSN: 0014-2999.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200108
 ED Entered STN: 20010903
 Last Updated on STN: 20010903
 Entered Medline: 20010830

L4 ANSWER 287 OF 473 MEDLINE on STN
 AN 2001338297 MEDLINE
 DN PubMed ID: 11164999
 TI The physiology of brain histamine.
 AU Brown R E; Stevens D R; Haas H L
 CS Institut fur Neurophysiologie, Heinrich-Heine-Universitat, D-40001, Dusseldorf, Germany.. brown@uni-duesseldorf.de
 SO Progress in neurobiology, *** (2001 Apr) *** 63 (6) 637-72. Ref: 340
 Journal code: 0370121. ISSN: 0301-0082.
 CY England: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 200106
 ED Entered STN: 20010618
 Last Updated on STN: 20010618
 Entered Medline: 20010614

L4 ANSWER 288 OF 473 MEDLINE on STN
 AN 2001329720 MEDLINE
 DN PubMed ID: 11397782
 TI Arrhythmogenesis and contractile dysfunction in heart failure: Roles of sodium-calcium exchange, inward rectifier potassium current, and residual beta-adrenergic responsiveness.
 CM Comment in: Circ Res. 2001 Jun 8;88(11):1095-6. PubMed ID: 11397771
 AU Pogwizd S M; Schlotthauer K; Li L; Yuan W; Bers D M
 CS Department of Medicine, University of Illinois, Chicago, IL, USA.
 NC HL-30077 (NHLBI)
 HL-46929 (NHLBI)
 HL-64724 (NHLBI)
 SO Circulation research, *** (2001 Jun 8) *** 88 (11) 1159-67.
 Journal code: 0047103. ISSN: 1524-4571.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200107
 ED Entered STN: 20010716
 Last Updated on STN: 20010716
 Entered Medline: 20010712

L4 ANSWER 289 OF 473 MEDLINE on STN
 AN 2001329709 MEDLINE
 DN PubMed ID: 11397771
 TI New era for translational research in cardiac arrhythmias.
 CM Comment on: Circ Res. 2001 Jun 8;88(11):1159-67. PubMed ID: 11397782
 AU Adachi-Akahane S; Kurachi Y
 SO Circulation research, *** (2001 Jun 8) *** 88 (11) 1095-6.
 Journal code: 0047103. ISSN: 1524-4571.
 CY United States
 DT Commentary
 Editorial
 LA English
 FS Priority Journals

ED Entered STN: 20010716
 Last Updated on STN: 20010730
 Entered Medline: 20010712

L4 ANSWER 290 OF 473 MEDLINE on STN
 AN 2001296967 MEDLINE
 DN PubMed ID: 11377809
 TI Mitochondria as target for antiischemic drugs.
 AU Morin D; Hauet T; Spedding M; Tillement J
 CS Laboratoire de Pharmacologie and Centre National de La Recherche Scientifique, Faculte de Medecine de Paris XII, 8 rue du General Sarraill, F-94010 Creteil, France.. morin@univ-paris12.fr
 SO Advanced drug delivery reviews, *** (2001 Jul 2)*** 49 (1-2) 151-74.
 Ref: 229
 Journal code: 8710523. ISSN: 0169-409X.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW LITERATURE)
 LA English
 FS Priority Journals
 EM 200108
 ED Entered STN: 20010806
 Last Updated on STN: 20010806
 Entered Medline: 20010802

L4 ANSWER 291 OF 473 MEDLINE on STN
 AN 2001290066 MEDLINE
 DN PubMed ID: 11348995
 TI Cardiac Na(+)-Ca(2+) exchange: molecular and pharmacological aspects.
 AU Shigekawa M; Iwamoto T
 CS Department of Molecular Physiology, National Cardiovascular Center Research Institute, Suita, Osaka, Japan.. shigekaw@ri.ncvc.go.jp
 SO Circulation research, *** (2001 May 11)*** 88 (9) 864-76. Ref: 139
 Journal code: 00471103. ISSN: 1524-4571.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200106
 ED Entered STN: 20010702
 Last Updated on STN: 20010702
 Entered Medline: 20010628

L4 ANSWER 292 OF 473 MEDLINE on STN
 AN 2001285835 MEDLINE
 DN PubMed ID: 11243417
 TI KB-R7943, a selective Na⁺/Ca²⁺ exchange inhibitor, protects against ischemic acute renal failure in mice by inhibiting renal endothelin-1 overproduction.
 AU Yamashita J; Ogata M; Takaoka M; Matsumura Y
 CS Department of Pharmacology, Osaka University, of Pharmaceutical Sciences, Takatsuki, Japan.
 SO Journal of cardiovascular pharmacology, *** (2001 Mar)*** 37 (3) 271-9.
 Journal code: 7902492. ISSN: 0160-2446.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200105
 ED Entered STN: 20010529
 Last Updated on STN: 20010529
 Entered Medline: 20010524

L4 ANSWER 293 OF 473 MEDLINE on STN
 AN 2001239912 MEDLINE
 DN PubMed ID: 11334878
 TI Effect of 2',4'-dichlorobenzamil hydrochloride, a Na(+)-Ca(2+) exchange inhibitor, on ***human*** spermatozoa.
 AU Reddy P R; Patni A; Sharma A; Gupta S; Tiwary A K
 CS Department of Pharmaceutical Sciences and Drug Research, Punjabi University, 147 002, Patiala, India.
 NC N01MH30003 (NIMH)

Journal code: 1254354. ISSN: 0014-2999.

CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200109
ED Entered STN: 20011001
Last Updated on STN: 20011001
Entered Medline: 20010927

L4 ANSWER 294 OF 473 MEDLINE on STN
AN 2001239739 MEDLINE
DN PubMed ID: 11334793
TI The effects of the Na(+)/Ca(++) exchange blocker on osmotic blood-brain barrier disruption.
AU Bhattacharjee A K; Nagashima T; Kondoh T; Tamaki N
CS Department of Neurosurgery, Kobe University School of Medicine, 7-5-1 Kusunoki Cho, Chuo-Ku, 650-0017, Kobe, Japan.
SO Brain research, *** (2001 May 11) *** 900 (2) 157-62.
Journal code: 0045503. ISSN: 0006-8993.

CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200109
ED Entered STN: 20010910
Last Updated on STN: 20010910
Entered Medline: 20010906

L4 ANSWER 295 OF 473 MEDLINE on STN
AN 2001236342 MEDLINE
DN PubMed ID: 11264230
TI Inhibition of aggregation of rabbit and ***human*** platelets induced by adrenaline and 5-hydroxytryptamine by KB-R7943, a Na(+)/Ca(2+) exchange inhibitor.
AU Takano S; Kimura J; Ono T
CS Department of Pharmacology, School of Medicine, Fukushima Medical University, Hikari-ga-oka 1, Fukushima 960-1295, Japan..
s-takano@cc.fmu.ac.jp
SO British journal of pharmacology, *** (2001 Apr) *** 132 (7) 1383-8.
Journal code: 7502536. ISSN: 0007-1188.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010521
Last Updated on STN: 20010521
Entered Medline: 20010517

L4 ANSWER 296 OF 473 MEDLINE on STN
AN 2001236215 MEDLINE
DN PubMed ID: 11134012
TI The transport activity of the Na⁺-Ca²⁺ exchanger NCX1 expressed in HEK 293 cells is sensitive to covalent modification of intracellular cysteine residues by sulfhydryl reagents.
AU Ren X; Kasir J; Rahamimoff H
CS Department of Biochemistry, Hebrew University-Hadassah Medical School, Jerusalem 91120, Israel.
SO Journal of biological chemistry, *** (2001 Mar 23) *** 276 (12) 9572-9.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010517
Last Updated on STN: 20030105
Entered Medline: 20010503

L4 ANSWER 297 OF 473 MEDLINE on STN
AN 2001216796 MEDLINE
DN PubMed ID: 11247757
TI Platelet hyperactivity and abnormal Ca(2+) homeostasis in diabetes mellitus.

CS Department of Pharmacology and Therapeutics, University of Manitoba,
 Winnipeg R3E OW3, Canada.
 SO American journal of physiology. Heart and circulatory physiology,
 *** (2001 Apr) *** 280 (4) H1480-9.
 Journal code: 100901228. ISSN: 0363-6135.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200104
 ED Entered STN: 20010425
 Last Updated on STN: 20010425
 Entered Medline: 20010419

L4 ANSWER 298 OF 473 MEDLINE on STN
 AN 2001112639 MEDLINE
 DN PubMed ID: 11035002
 TI Helix packing of functionally important regions of the cardiac
 Na(+)-Ca(2+) exchanger.
 AU Qiu Z; Nicoll D A; Philipson K D
 CS Department of Physiology, UCLA School of Medicine, Los Angeles, California
 90095-1760, USA.
 NC HL49101 (NHLBI)
 SO Journal of biological chemistry, *** (2001 Jan 5) *** 276 (1) 194-9.
 Journal code: 2985121R. ISSN: 0021-9258.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200102
 ED Entered STN: 20010322
 Last Updated on STN: 20010322
 Entered Medline: 20010208

L4 ANSWER 299 OF 473 MEDLINE on STN
 AN 2001034525 MEDLINE
 DN PubMed ID: 10949914
 TI Interaction between the actions of taurine and angiotensin II.
 AU Schaffer S W; Lombardini J B; Azuma J
 CS Department of Pharmacology, School of Medicine, University of South
 Alabama, Mobile 36688, USA.
 SO Amino acids, *** (2000) *** 18 (4) 305-18. Ref: 81
 Journal code: 9200312. ISSN: 0939-4451.
 CY Austria
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200011
 ED Entered STN: 20010322
 Last Updated on STN: 20010322
 Entered Medline: 20001130

L4 ANSWER 300 OF 473 MEDLINE on STN
 AN 2001025369 MEDLINE
 DN PubMed ID: 11029397
 TI Increased Na(+)-Ca(2+) exchanger in the failing heart.
 CM Comment on: Circ Res. 2000 Oct 13;87(8):690-8. PubMed ID: 11029405
 AU Pogwizd S M
 SO Circulation research, *** (2000 Oct 13) *** 87 (8) 641-3.
 Journal code: 0047103. ISSN: 1524-4571.
 CY United States
 DT Commentary
 Editorial
 LA English
 FS Priority Journals
 EM 200011
 ED Entered STN: 20010322
 Last Updated on STN: 20010521
 Entered Medline: 20001113

L4 ANSWER 301 OF 473 MEDLINE on STN
 AN 2001012611 MEDLINE
 DN PubMed ID: 11009553

CM Comment on: Circ Res. 2000 Sep 29;87(7):588-95.. PubMed ID: 11009564
 AU Barry W H
 SO Circulation research, *** (2000 Sep 29)*** 87 (7) 529-31.
 Journal code: 0047103. ISSN: 1524-4571.
 CY United States
 DT Commentary
 Editorial
 LA English
 FS Priority Journals
 EM 200010
 ED Entered STN: 20010322
 Last Updated on STN: 20010521
 Entered Medline: 20001030

L4 ANSWER 302 OF 473 MEDLINE on STN
 AN 2001010239 MEDLINE
 DN PubMed ID: 10953508
 TI [Na⁺/Ca⁺ exchange: structure, mechanism, regulation and function].
 Na⁺/Ca²⁺ výmena: struktúra, mechanizmus, regulácia a funkcia.
 AU Stengl M; Pucelik P
 CS Fyziologický ústav LF UK, Plzeň.. stengl@lfp.cuni.cz
 SO Československá fysiologie / Ustřední ústav biologický, *** (2000 May)***
 49 (2) 73-90. Ref: 166
 Journal code: 2984710R. ISSN: 1210-6313.
 CY Czech Republic
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA Czech
 FS Priority Journals
 EM 200010
 ED Entered STN: 20010322
 Last Updated on STN: 20010322
 Entered Medline: 20001026

L4 ANSWER 303 OF 473 MEDLINE on STN
 AN 2000479346 MEDLINE
 DN PubMed ID: 11023899
 TI Na⁽⁺⁾-Ca⁽²⁺⁾-K⁽⁺⁾ currents measured in insect cells transfected with the
 retinal cone or rod Na⁽⁺⁾-Ca⁽²⁺⁾-K⁽⁺⁾ exchanger cDNA.
 AU Sheng J Z; Prinsen C F; Clark R B; Giles W R; Schnetkamp P P
 CS Department of Physiology and Biophysics and the MRC Group on Ion
 Channels/Transporters, Faculty of Medicine, University of Calgary,
 Calgary, Alberta T2N 4N1, Canada.
 SO Biophysical journal, *** (2000 Oct)*** 79 (4) 1945-53.
 Journal code: 0370626. ISSN: 0006-3495.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200011
 ED Entered STN: 20010322
 Last Updated on STN: 20010322
 Entered Medline: 20001113

L4 ANSWER 304 OF 473 MEDLINE on STN
 AN 2000441615 MEDLINE
 DN PubMed ID: 10845086
 TI Sodium-calcium exchange: a molecular perspective.
 AU Philipson K D; Nicoll D A
 CS Department of Physiology, UCLA School of Medicine 90095-1760, USA..
 kphilipson@mednet.ucla.edu
 SO Annual review of physiology, *** (2000)*** 62 111-33. Ref: 11
 Journal code: 0370600. ISSN: 0066-4278.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200009
 ED Entered STN: 20000928
 Last Updated on STN: 20000928
 Entered Medline: 20000918

AN 2000439723 MEDLINE
 DN PubMed ID: 10905082
 TI [Neuroprotective effect of sodium channel blockers in ischemia: the pathomechanism of early ischemic dysfunction].
 A Na(+)-csatorna-gatlok neuroprotektív hatása ischaemiában: az ischaemia patomechanizmusának elmeleti alapjai.
 AU Adam-Vizi V
 CS Semmelweis Egyetem, Altalanos Orvostudományi Kar, Orvosi Biokémia Intézet, Budapest.
 SO Orvosi hetilap, *** (2000 Jun 4) *** 141 (23) 1279-86. Ref: 95
 Journal code: 0376412. ISSN: 0030-6002.
 CY Hungary
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA Hungarian
 FS Priority Journals
 EM 200009
 ED Entered STN: 20000928
 Last Updated on STN: 20000928
 Entered Medline: 20000919

L4 ANSWER 306 OF 473 MEDLINE on STN
 AN 2000424106 MEDLINE
 DN PubMed ID: 10900141
 TI Calcitriol upregulates expression and activity of the 1b isoform of the plasma membrane calcium pump in immortalized distal kidney tubular cells.
 AU Glendenning P; Ratajczak T; Dick I M; Prince R L
 CS Department of Medicine, University of Western Australia, Nedlands, Western Australia, 6009, Australia.. paulglen@cyllene.uwa.edu.au
 SO Archives of biochemistry and biophysics, *** (2000 Aug 1) *** 380 (1) 126-32.
 Journal code: 0372430. ISSN: 0003-9861.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200009
 ED Entered STN: 20000915
 Last Updated on STN: 20000915
 Entered Medline: 20000907

L4 ANSWER 307 OF 473 MEDLINE on STN
 AN 2000407127 MEDLINE
 DN PubMed ID: 10935554
 TI Left ventricular assist device-induced reverse ventricular remodeling.
 AU Burkhoff D; Holmes J W; Madigan J; Barbone A; Oz M C
 CS Department of Medicine, Columbia University, New York, NY 10032, USA.. db59@columbia.edu
 SO Progress in cardiovascular diseases, *** (2000 Jul-Aug) *** 43 (1) 19-26. Ref: 22
 Journal code: 0376442. ISSN: 0033-0620.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 200008
 ED Entered STN: 20000901
 Last Updated on STN: 20000901
 Entered Medline: 20000822

L4 ANSWER 308 OF 473 MEDLINE on STN
 AN 2000400859 MEDLINE
 DN PubMed ID: 10822169
 TI D609-phosphatidylcholine-specific phospholipase C inhibitor attenuates thapsigargin-induced sodium influx in ***human*** lymphocytes.
 AU Nofer J R; Junker R; Seedorf U; Assmann G; Zidek W; Tepel M
 CS Institut für Klinische Chemie und Laboratoriumsmedizin, Zentrallaboratorium, Westfälische Wilhelms-Universität, A. Schweitzer Str 33, 48-149, Münster, Germany.. nofer@uni-muenster.de
 SO Cellular signalling, *** (2000 May) *** 12 (5) 289-96.
 Journal code: 8904683. ISSN: 0898-6568.
 CY ENGLAND: United Kingdom

LA English
 FS Priority Journals
 EM 200008
 ED Entered STN: 20000901
 Last Updated on STN: 20000901
 Entered Medline: 20000824

L4 ANSWER 309 OF 473 MEDLINE on STN
 AN 2000247144 MEDLINE
 DN PubMed ID: 10785365
 TI The N-terminal portion of the main cytosolic loop mediates K⁺ sensitivity in the retinal rod Na⁺/Ca²⁺-K⁺-exchanger.
 AU Seiler E P; Guerini D; Guidi F; Carafoli E
 CS Department of Biochemistry III, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland.
 SO European journal of biochemistry / FEBS, *** (2000 May)*** 267 (9) 2461-72.
 Journal code: 0107600. ISSN: 0014-2956.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200006
 ED Entered STN: 20000622
 Last Updated on STN: 20000622
 Entered Medline: 20000615

L4 ANSWER 310 OF 473 MEDLINE on STN
 AN 2000217335 MEDLINE
 DN PubMed ID: 10751314
 TI Alternatively spliced isoforms of the rat eye sodium/calcium+potassium exchanger NCKX1.
 AU Poon S; Leach S; Li X F; Tucker J E; Schnetkamp P P; Lytton J
 CS Department of Biochemistry and Molecular Biology and Department of Physiology and Biophysics, University of Calgary, Calgary, Alberta, Canada T2N 4N1.
 SO American journal of physiology. Cell physiology, *** (2000 Apr)*** 278 (4) C651-60.
 Journal code: 100901225. ISSN: 0363-6143.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200004
 ED Entered STN: 20000505
 Last Updated on STN: 20000505
 Entered Medline: 20000427

L4 ANSWER 311 OF 473 MEDLINE on STN
 AN 2000155916 MEDLINE
 DN PubMed ID: 10691802
 TI Renal sodium/calcium exchange; a vasodilator that is defective in salt-sensitive hypertension.
 AU Bell P D; Mashburn N; Unlap M T
 CS Nephrology Research and Training Center, Departments of Medicine and Physiology, Division of Nephrology, University of Alabama at Birmingham, Birmingham, AL 35294, USA.
 NC 3R01DK32032 (NIDDK)
 HL50163 (NHLBI)
 SO Acta physiologica Scandinavica, *** (2000 Jan)*** 168 (1) 209-14. Ref: 35
 Journal code: 0370362. ISSN: 0001-6772.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200003
 ED Entered STN: 20000407
 Last Updated on STN: 20000407
 Entered Medline: 20000327

L4 ANSWER 312 OF 473 MEDLINE on STN
 AN 2000076496 MEDLINE

TI The retinal rod Na(+)/Ca(2+),K(+) exchanger contains a noncleaved signal
 sequence required for translocation of the N terminus.
 AU McKiernan C J; Friedlander M
 CS Department of Cell Biology, The Scripps Research Institute, La Jolla,
 California 92037, USA.
 NC 5F32 EY06820 (NEI)
 SO Journal of biological chemistry, *** (1999 Dec 31)*** 274 (53)
 38177-82.
 Journal code: 2985121R. ISSN: 0021-9258.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200002
 ED Entered STN: 20000218
 Last Updated on STN: 20000218
 Entered Medline: 20000208

L4 ANSWER 313 OF 473 MEDLINE on STN
 AN 2000071617 MEDLINE
 DN PubMed ID: 10603950
 TI Sarcoplasmic reticulum proteins in heart failure.
 AU Lehnart S E; Schillinger W; Pieske B; Prestle J; Just H; Hasenfuss G
 CS Medizinische Klinik III, Universitat Freiburg, Germany.
 SO Annals of the New York Academy of Sciences, *** (1998 Sep 16)*** 853
 220-30. Ref: 52
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 200001
 ED Entered STN: 20000124
 Last Updated on STN: 20000124
 Entered Medline: 20000107

L4 ANSWER 314 OF 473 MEDLINE on STN
 AN 2000040157 MEDLINE
 DN PubMed ID: 10571527
 TI Sodium-calcium exchange: the phantom menace.
 CM Comment on: Circ Res. 1999 Nov 26;85(11):1009-19. PubMed ID: 10571531
 AU Goldhaber J I
 SO Circulation research, *** (1999 Nov 26)*** 85 (11) 982-4.
 Journal code: 0047103. ISSN: 0009-7330.
 CY United States
 DT Commentary
 Editorial
 LA English
 FS Priority Journals
 EM 200001
 ED Entered STN: 20000114
 Last Updated on STN: 20000114
 Entered Medline: 20000105

L4 ANSWER 315 OF 473 MEDLINE on STN
 AN 2000006744 MEDLINE
 DN PubMed ID: 10536662
 TI Heterogeneous transmural gene expression of calcium-handling proteins and
 natriuretic peptides in the failing ***human*** heart.
 CM Comment in: Cardiovasc Res. 1999 Aug 1;43(2):279-81. PubMed ID: 10536655
 AU Prestle J; Dieterich S; Preuss M; Bieligk U; Hasenfuss G
 CS Abteilung Kardiologie und Pneumologie, Georg-August-Universitat Gottingen,
 Germany.. jprestle@mdv.gwdg.de
 SO Cardiovascular research, *** (1999 Aug 1)*** 43 (2) 323-31.
 Journal code: 0077427. ISSN: 0008-6363.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199911
 ED Entered STN: 20000111
 Last Updated on STN: 20000229
 Entered Medline: 19991108

L4 ANSWER 316 OF 473 MEDLINE on STN
 AN 1999440255 MEDLINE
 DN PubMed ID: 10510560
 TI [Structure and function of selected Ca(2+) transport systems in cardiac cells].
 Struktura a funkcia vybranych Ca(2+)-transportnych systemov v srdcovych bunkach.
 AU Zacikova L; Krizanova O
 CS Ustav molekularnej fyziologie a genetiky Slovenskej akademie vied, Bratislava.
 SO Ceskoslovenska fyziologie / Ustredni ustav biologicky, *** (1999 May) ***
 48 (2) 62-76. Ref: 148
 Journal code: 2984710R. ISSN: 1210-6313.
 CY Czech Republic
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA Slovak
 FS Priority Journals
 EM 199910
 ED Entered STN: 19991101
 Last Updated on STN: 19991101
 Entered Medline: 19991021

L4 ANSWER 317 OF 473 MEDLINE on STN
 AN 1999367311 MEDLINE
 DN PubMed ID: 10436268
 TI Na(+)/Ca(2+) exchange inhibitors modulate thapsigargin-induced Ca(2+) and Na(+) influx in ***human*** lymphocytes.
 AU Nofer J R; Pulawski E; Junker R; Seedorf U; Assmann G; Zidek W; Tepel M
 CS Institut fur Klinische Chemie und Laboratoriumsmedizin, Zentrallaboratorium, Westfalische Wilhelms-Universitat, Albert Schweizer Strasse 33, D-48149 Munster, Germany.
 SO International journal of clinical & laboratory research, *** (1999) ***
 29 (2) 89-92.
 Journal code: 9206491. ISSN: 0940-5437.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199910
 ED Entered STN: 19991026
 Last Updated on STN: 20021210
 Entered Medline: 19991012

L4 ANSWER 318 OF 473 MEDLINE on STN
 AN 1999339017 MEDLINE
 DN PubMed ID: 10410828
 TI Mechanism underlying the strong positive inotropic effects of LND-623: specific inhibition of Na, K-ATPase isoforms and exclusion of cellular sites of contractile control.
 AU Maixent J M; Lelievre L; Berrebi-Bertrand I
 CS Laboratoire de Recherche Cardiologique, Faculte de Medecine, Universite de la Mediterranee, Marseille, France.
 SO Cardiovascular drugs and therapy / sponsored by the International Society of Cardiovascular Pharmacotherapy, *** (1998 Dec) *** 12 (6) 585-94.
 Journal code: 8712220. ISSN: 0920-3206.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199909
 ED Entered STN: 19990925
 Last Updated on STN: 19990925
 Entered Medline: 19990914

L4 ANSWER 319 OF 473 MEDLINE on STN
 AN 1999322472 MEDLINE
 DN PubMed ID: 10390518
 TI Sodium/calcium exchange: its physiological implications.
 AU Blaustein M P; Lederer W J
 CS Departments of Physiology, University of Maryland School of Medicine, Baltimore, USA.
 NC HL-25675 (NHLBI)
 HL-45215 (NHLBI)

SO Physiological reviews, *** (1999 Jul) *** 79 (3) 763-854. Ref: 1010
 Journal code: 0231714. ISSN: 0031-9333.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199907
 ED Entered STN: 19990806
 Last Updated on STN: 19990806
 Entered Medline: 19990723

L4 ANSWER 320 OF 473 MEDLINE on STN
 AN 1999255385 MEDLINE
 DN PubMed ID: 10320357
 TI cDNA cloning and functional expression of the dolphin retinal rod Na-Ca+K
 exchanger NCKX1: comparison with the functionally silent bovine NCKX1.
 AU Cooper C B; Winkfein R J; Szerencsei R T; Schnetkamp P P
 CS Departments of Physiology & Biophysics and of Biochemistry & Molecular
 Biology, and MRC Group on Ion Channels and Transporters, The University of
 Calgary, 3330 Hospital Drive, N.W., Calgary, Alberta, T2N 4N1 Canada.
 SO Biochemistry, *** (1999 May 11) *** 38 (19) 6276-83.
 Journal code: 0370623. ISSN: 0006-2960.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199906
 ED Entered STN: 19990618
 Last Updated on STN: 19990618
 Entered Medline: 19990607

L4 ANSWER 321 OF 473 MEDLINE on STN
 AN 1999233987 MEDLINE
 DN PubMed ID: 10217649
 TI Reduced sodium pump alpha1, alpha3, and beta1-isoform protein levels and
 Na+,K+-ATPase activity but unchanged Na+-Ca2+ exchanger protein levels in
 human heart failure.
 AU Schwinger R H; Wang J; Frank K; Muller-Ehmsen J; Brixius K; McDonough A A;
 Erdmann E
 CS Klinik III fur Innere Medizin der Universitat zu Koln (Germany)..
 Robert.Schwinger@medizin.uni-koeln.de
 NC DK34316 (NIDDK)
 SO Circulation, *** (1999 Apr 27) *** 99 (16) 2105-12.
 Journal code: 0147763. ISSN: 1524-4539.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199905
 ED Entered STN: 19990601
 Last Updated on STN: 20010521
 Entered Medline: 19990517

L4 ANSWER 322 OF 473 MEDLINE on STN
 AN 1999216483 MEDLINE
 DN PubMed ID: 10198283
 TI Reactive oxygen metabolites increase mitochondrial calcium in endothelial
 cells: implication of the Ca2+/Na+ exchanger.
 AU Jornot L; Maechler P; Wollheim C B; Junod A F
 CS Respiratory Division and Division of Clinical Biochemistry, Department of
 Internal Medicine, University Hospital, Switzerland..
 lan.h.jornot@hcuge.ch
 SO Journal of cell science, *** (1999 Apr) *** 112 (Pt 7) 1013-22.
 Journal code: 0052457. ISSN: 0021-9533.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199907
 ED Entered STN: 19990727
 Last Updated on STN: 19990727
 Entered Medline: 19990709

AN 1999207220 MEDLINE
DN PubMed ID: 10191496
TI The Ca2+ pumps and the Na+/Ca2+ exchangers.
AU Guerini D
CS Institute of Biochemistry, Swiss Federal Institute of Technology (ETH),
Zurich, Switzerland.. guerini@bc.biol.ethz.ch
SO Biometals : an international journal on the role of metal ions in biology,
biochemistry, and medicine, *** (1998 Dec) *** 11 (4) 319-30. Ref: 116
Journal code: 9208478. ISSN: 0966-0844.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 199904
ED Entered STN: 19990511
Last Updated on STN: 20000303
Entered Medline: 19990426

L4 ANSWER 324 OF 473 MEDLINE on STN
AN 1999190721 MEDLINE
DN PubMed ID: 10089232
TI Regulatory function of Na-Ca exchange in the heart: milestones and
outlook.
AU Egger M; Niggli E
CS Department of Physiology, University of Bern, Buhlplatz 5, CH-3012 Bern,
Switzerland.
SO Journal of membrane biology, *** (1999 Mar 15) *** 168 (2) 107-30. Ref:
208
Journal code: 0211301. ISSN: 0022-2631.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 199905
ED Entered STN: 19990607
Last Updated on STN: 19990607
Entered Medline: 19990527

L4 ANSWER 325 OF 473 MEDLINE on STN
AN 1999189802 MEDLINE
DN PubMed ID: 10089932
TI Na+/Ca++ exchanger and myocardial ischemia/reperfusion.
AU Mochizuki S; Jiang C
CS Department of Medicine, Jikei University, School of Medicine, Tokyo,
Japan.
SO Japanese heart journal, *** (1998 Nov) *** 39 (6) 707-14.
Journal code: 0401175. ISSN: 0021-4868.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199904
ED Entered STN: 19990420
Last Updated on STN: 19990420
Entered Medline: 19990407

L4 ANSWER 326 OF 473 MEDLINE on STN
AN 1999184735 MEDLINE
DN PubMed ID: 10082981
TI Metabolic pathways in the regulation of invertebrate and vertebrate
Na+/Ca2+ exchange.
AU DiPolo R; Beauge L
CS Laboratorio de Permeabilidad Ionica, Centro de Biofisica y Bioquimica,
IVIC, Apartado 21827, Caracas 1020-A, Venezuela.. ridipolo@cbb.ivic.ve
SO Biochimica et biophysica acta, *** (1999 Feb 25) *** 1422 (1) 57-71.
Ref: 82
Journal code: 0217513. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

FS Priority Journals
 EM 199904
 ED Entered STN: 19990511
 Last Updated on STN: 19990511
 Entered Medline: 19990427

L4 ANSWER 327 OF 473 MEDLINE on STN
 AN 1999170405 MEDLINE
 DN PubMed ID: 10072189
 TI Mechanisms involved in the cellular calcium homeostasis in vascular smooth muscle: calcium pumps.
 AU Marin J; Encabo A; Briones A; Garcia-Cohen E C; Alonso M J
 CS Departamento de Farmacologia y Terapeutica, Facultad de Medicina, Universidad Autonoma de Madrid, Spain.. Jesus.Marin@uam.es
 SO Life sciences, *** (1999) *** 64 (5) 279-303. Ref: 253
 Journal code: 0375521. ISSN: 0024-3205.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199903
 ED Entered STN: 19990402
 Last Updated on STN: 19990402
 Entered Medline: 19990323

L4 ANSWER 328 OF 473 MEDLINE on STN
 AN 1999081222 MEDLINE
 DN PubMed ID: 9865624
 TI Immunohistochemical localization of Na⁺/Ca²⁺ exchanger in ***human*** retina and retinal pigment epithelium.
 AU Loeffler K U; Mangini N J
 CS Universitats-Augenklinik, Bonn, Germany.. karinloeffler@compuserve.com
 NC EY01792 (NEI)
 EY11308 (NEI)
 SO Graefe's archive for clinical and experimental ophthalmology = Albrecht von Graefes Archiv fur klinische und experimentelle Ophthalmologie, *** (1998 Dec) *** 236 (12) 929-33.
 Journal code: 8205248. ISSN: 0721-832X.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199903
 ED Entered STN: 19990326
 Last Updated on STN: 19990326
 Entered Medline: 19990316

L4 ANSWER 329 OF 473 MEDLINE on STN
 AN 1999072302 MEDLINE
 DN PubMed ID: 9856482
 TI Chromosomal localization and genomic organization of the ***human*** retinal rod Na-Ca+K exchanger.
 AU Tucker J E; Winkfein R J; Murthy S K; Friedman J S; Walter M A; Demetrick D J; Schnetkamp P P
 CS Department of Biochemistry & Molecular Biology, and the MRC Group on Ion Channels/Transporters, Faculty of Medicine, University of Calgary, Canada.
 SO Human genetics, *** (1998 Oct) *** 103 (4) 411-4.
 Journal code: 7613873. ISSN: 0340-6717.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 OS GENBANK-AF062922; GENBANK-AF062923; GENBANK-AF076932; GENBANK-AF076933; GENBANK-AF076934; GENBANK-AF076935; GENBANK-AF076936; GENBANK-AF076937; GENBANK-AF076938; GENBANK-AF076939; GENBANK-AF076940; GENBANK-AF076941; GENBANK-AF076942; GENBANK-AF076943; GENBANK-AF076944; GENBANK-AF076945; GENBANK-AF076946; GENBANK-AF076947; GENBANK-AF076948; GENBANK-AF076949
 EM 199812
 ED Entered STN: 19990115
 Last Updated on STN: 20000303
 Entered Medline: 19981223

L4 ANSWER 330 OF 473 MEDLINE on STN

DN PubMed ID: 9843164
 TI A Glanzmann thrombasthenia-like phenotype caused by a defect in inside-out signaling through the integrin α (IIB) β 3.
 AU Tomiyama Y; Shiraga M; Kinoshita S; Ambo H; Kurata Y; Matsuzawa Y; Kunicki T J
 CS Second Department of Internal Medicine, Osaka University Medical School, Suita, Japan.
 NC ROHL46979 (NHLBI)
 SO Thrombosis and haemostasis, *** (1998 Nov) *** 80 (5) 735-42.
 Journal code: 7608063. ISSN: 0340-6245.
 CY GERMANY: Germany, Federal Republic of
 DT (CASE REPORTS)
 Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199903
 ED Entered STN: 19990413
 Last Updated on STN: 19990413
 Entered Medline: 19990330

L4 ANSWER 331 OF 473 MEDLINE on STN
 AN 1999025945 MEDLINE
 DN PubMed ID: 9808565
 TI Involvement of $\text{Na}^+/\text{Ca}^{2+}$ exchanger in inside-out signaling through the platelet integrin $\text{IIB}\beta 3$.
 AU Shiraga M; Tomiyama Y; Honda S; Suzuki H; Kosugi S; Tadokoro S; Kanakura Y; Tanoue K; Kurata Y; Matsuzawa Y
 CS Second Department of Internal Medicine, Osaka University Medical School and Department of Blood Transfusion, Osaka University Hospital, Osaka, Japan, USA.
 SO Blood, *** (1998 Nov 15) *** 92 (10) 3710-20.
 Journal code: 7603509. ISSN: 0006-4971.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199812
 ED Entered STN: 19990115
 Last Updated on STN: 19990115
 Entered Medline: 19981221

L4 ANSWER 332 OF 473 MEDLINE on STN
 AN 1999006692 MEDLINE
 DN PubMed ID: 9792206
 TI Is ouabain produced by the adrenal gland?.
 AU Foster R H; Prat H; Rothman I
 CS Department of Physiology and Biophysics, Faculty of Medicine, University of Chile, Santiago.
 SO General pharmacology, *** (1998 Oct) *** 31 (4) 499-501. Ref: 35
 Journal code: 7602417. ISSN: 0306-3623.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199901
 ED Entered STN: 19990202
 Last Updated on STN: 19990202
 Entered Medline: 19990120

L4 ANSWER 333 OF 473 MEDLINE on STN
 AN 1999004452 MEDLINE
 DN PubMed ID: 9788155
 TI Ca^{2+} mobilization and pumping out mechanism.
 AU Mikoshiba K
 CS Department of Molecular Neurobiology, University of Tokyo, Japan.
 SO Tanpakushitsu kakusan koso. Protein, nucleic acid, enzyme, *** (1998 *** Sep) *** 43 (12 Suppl) 1577-8. Ref: 0
 Journal code: 0413762. ISSN: 0039-9450.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA Japanese

EM 199902
 ED Entered STN: 19990216
 Last Updated on STN: 19990216
 Entered Medline: 19990203

L4 ANSWER 334 OF 473 MEDLINE on STN
 AN 1999004449 MEDLINE
 DN PubMed ID: 9788152
 TI Na(+)-Ca²⁺ exchange.
 AU Matsuo S; Noma A
 CS Department of Physiology, Faculty of Medicine, Kyoto University, Japan.
 SO Tanpakushitsu kakusan koso. Protein, nucleic acid, enzyme, *** (1998)***
 *** Sep)*** 43 (12 Suppl) 1555-60. Ref: 49
 Journal code: 0413762. ISSN: 0039-9450.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA Japanese
 FS Priority Journals
 EM 199902
 ED Entered STN: 19990216
 Last Updated on STN: 19990216
 Entered Medline: 19990203

L4 ANSWER 335 OF 473 MEDLINE on STN
 AN 1999002133 MEDLINE
 DN PubMed ID: 9785953
 TI Modeling the cellular basis of altered excitation-contraction coupling in heart failure.
 AU Winslow R L; Rice J; Jafri S
 CS Department of Biomedical Engineering, Johns Hopkins University School of Medicine, Baltimore, MD 21205, USA.. rwinslow@bme.jhu.edu
 NC HL60133 (NHLBI)
 SO Progress in biophysics and molecular biology, *** (1998)*** 69 (2-3) 497-514. Ref: 45
 Journal code: 0401233. ISSN: 0079-6107.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199811
 ED Entered STN: 19990106
 Last Updated on STN: 19990106
 Entered Medline: 19981116

L4 ANSWER 336 OF 473 MEDLINE on STN
 AN 1998428557 MEDLINE
 DN PubMed ID: 9755808
 TI Mode-actions of the Na(+)-Ca²⁺ exchanger: from genes to mechanisms to a new strategy in brain disorders.
 AU Fang Y; Rong M; He L; Zhou C
 CS Department of Anesthesiology, Zhong Shan Hospital, Shanghai Medical University, China.
 SO Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie, *** (1998)*** 52 (4) 145-56.
 Journal code: 8213295. ISSN: 0753-3322.
 CY France
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199810
 ED Entered STN: 19981029
 Last Updated on STN: 20000303
 Entered Medline: 19981021

L4 ANSWER 337 OF 473 MEDLINE on STN
 AN 1998365285 MEDLINE
 DN PubMed ID: 9688596
 TI Differential inhibition of Na⁺/Ca²⁺ exchanger isoforms by divalent cations and isothiurea derivative.
 AU Iwamoto T; Shigekawa M
 CS Department of Molecular Physiology, National Cardiovascular Center

SO American journal of physiology, *** (1998 Aug) *** 275 (2 Pt 1) C423-30.
Journal code: 0370511. ISSN: 0002-9513.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199809
ED Entered STN: 19980925
Last Updated on STN: 19980925
Entered Medline: 19980916

L4 ANSWER 338 OF 473 MEDLINE on STN
AN 1998318765 MEDLINE
DN PubMed ID: 9654696
TI [New aspects of the pathophysiology of heart failure].
Neue Aspekte zur Pathophysiologie der Herzinsuffizienz.
AU Pieske B
CS Abteilung fur Kardiologie und Pneumologie, Zentrums Innere Medizin,
Georg-August-Universitat Gottingen, Deutschland.
SO Wiener medizinische Wochenschrift (1946), *** (1998) *** 148 (5) 108-20.
Ref: 168
Journal code: 8708475. ISSN: 0043-5341.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA German
FS Priority Journals
EM 199808
ED Entered STN: 19980910
Last Updated on STN: 19980910
Entered Medline: 19980828

L4 ANSWER 339 OF 473 MEDLINE on STN
AN 1998295677 MEDLINE
DN PubMed ID: 9633920
TI Simulation study of cellular electric properties in heart failure.
AU Priebe L; Beuckelmann D J
CS Department of Medicine III, University of Cologne, Germany.
SO Circulation research, *** (1998 Jun 15) *** 82 (11) 1206-23.
Journal code: 0047103. ISSN: 0009-7330.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199807
ED Entered STN: 19980716
Last Updated on STN: 19980716
Entered Medline: 19980702

L4 ANSWER 340 OF 473 MEDLINE on STN
AN 1998276681 MEDLINE
DN PubMed ID: 9614497
TI Contribution of reverse-mode sodium-calcium exchange to contractions in
failing ***human*** left ventricular myocytes.
AU Mattiello J A; Margulies K B; Jeevanandam V; Houser S R
CS Department of Physiology, Temple University School of Medicine,
Philadelphia, PA 19140, USA.
SO Cardiovascular research, *** (1998 Feb) *** 37 (2) 424-31.
Journal code: 0077427. ISSN: 0008-6363.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199806
ED Entered STN: 19980625
Last Updated on STN: 19980625
Entered Medline: 19980615

L4 ANSWER 341 OF 473 MEDLINE on STN
AN 1998263786 MEDLINE
DN PubMed ID: 9601480
TI Changes in intracellular Ca²⁺ mobilization and Ca²⁺ sensitization as
mechanisms of action of physiological interventions and inotropic agents
in intact myocardial cells.

CS Department of Pharmacology, Yamagata University School of Medicine, Japan.
 SO Japanese heart journal, *** (1998 Jan)*** 39 (1) 1-44. Ref: 272
 Journal code: 0401175. ISSN: 0021-4868.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199806
 ED Entered STN: 19980611
 Last Updated on STN: 19980611
 Entered Medline: 19980601

L4 ANSWER 342 OF 473 MEDLINE on STN
 AN 1998250746 MEDLINE
 DN PubMed ID: 9582332
 TI Structure-function analysis of CALX1.1, a Na⁺-Ca²⁺ exchanger from
 Drosophila. Mutagenesis of ionic regulatory sites.
 AU Dyck C; Maxwell K; Buchko J; Trac M; Omelchenko A; Hnatowich M; Hryshko L
 V
 CS Institute of Cardiovascular Sciences, Department of Physiology, Faculty of
 Medicine, University of Manitoba, St. Boniface General Hospital Research
 Centre, Winnipeg, Manitoba R2H 2A6, Canada.
 SO Journal of biological chemistry, *** (1998 May 22)*** 273 (21) 12981-7.
 Journal code: 2985121R. ISSN: 0021-9258.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199806
 ED Entered STN: 19980708
 Last Updated on STN: 20021210
 Entered Medline: 19980625

L4 ANSWER 343 OF 473 MEDLINE on STN
 AN 1998219151 MEDLINE
 DN PubMed ID: 9558460
 TI Codependence of renal calcium and sodium transport.
 AU Friedman P A
 CS Department of Pharmacology and Toxicology, Dartmouth Medical School,
 Hanover, New Hampshire 03755, USA.. PAF@Dartmouth.Edu
 NC GM 34399 (NIGMS)
 SO Annual review of physiology, *** (1998)*** 60 179-97. Ref: 125
 Journal code: 0370600. ISSN: 0066-4278.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199806
 ED Entered STN: 19980625
 Last Updated on STN: 19980625
 Entered Medline: 19980612

L4 ANSWER 344 OF 473 MEDLINE on STN
 AN 1998212832 MEDLINE
 DN PubMed ID: 9551468
 TI Response of Na⁺/Ca²⁺ antiporter to ischemia and glial/neuronal death.
 AU Matsuda T; Baba A
 CS Department of Pharmacology, Faculty of Pharmaceutical Sciences, Osaka
 University, Japan.
 SO Nippon yakurigaku zasshi. Japanese journal of pharmacology, *** (1998***
 *** Jan)*** 111 (1) 13-9. Ref: 52
 Journal code: 0420550. ISSN: 0015-5691.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA Japanese
 FS Priority Journals
 EM 199806
 ED Entered STN: 19980625
 Last Updated on STN: 20000303

L4 ANSWER 345 OF 473 MEDLINE on STN
 AN 1998191135 MEDLINE
 DN PubMed ID: 9530104
 TI ATP stimulation of Na⁺/Ca²⁺ exchange in cardiac sarcolemmal vesicles.
 AU Berberian G; Hidalgo C; DiPolo R; Beauge L
 CS Instituto de Investigacion Medica Mercedes y Martin Ferreyra, Cordoba, Argentina.
 SO American journal of physiology, *** (1998 Mar) *** 274 (3 Pt 1) C724-33.
 Journal code: 0370511. ISSN: 0002-9513.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199804
 ED Entered STN: 19980507
 Last Updated on STN: 19980507
 Entered Medline: 19980424

L4 ANSWER 346 OF 473 MEDLINE on STN
 AN 1998182628 MEDLINE
 DN PubMed ID: 9522160
 TI Review of some actions of taurine on ion channels of cardiac muscle cells and others.
 AU Satoh H; Sperelakis N
 CS Department of Pharmacology, Nara Medical University, Japan.
 SO General pharmacology, *** (1998 Apr) *** 30 (4) 451-63. Ref: 106
 Journal code: 7602417. ISSN: 0306-3623.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199805
 ED Entered STN: 19980520
 Last Updated on STN: 19980520
 Entered Medline: 19980512

L4 ANSWER 347 OF 473 MEDLINE on STN
 AN 1998181480 MEDLINE
 DN PubMed ID: 9520863
 TI Calcium-dependent inhibition of the sodium-calcium exchange current by KB-R7943.
 AU Watano T; Kimura J
 CS Department of Pharmacology, Fukushima Medical College, Japan.
 SO Canadian journal of cardiology, *** (1998 Feb) *** 14 (2) 259-62.
 Journal code: 8510280. ISSN: 0828-282X.
 CY Canada
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199804
 ED Entered STN: 19980416
 Last Updated on STN: 19980416
 Entered Medline: 19980406

L4 ANSWER 348 OF 473 MEDLINE on STN
 AN 1998138491 MEDLINE
 DN PubMed ID: 9478004
 TI cDNA cloning of the ***human*** retinal rod Na-Ca + K exchanger: comparison with a revised bovine sequence.
 AU Tucker J E; Winkfein R J; Cooper C B; Schnetkamp P P
 CS Department of Medical Biochemistry, Faculty of Medicine, University of Calgary, Canada.
 SO Investigative ophthalmology & visual science, *** (1998 Feb) *** 39 (2) 435-40.
 Journal code: 7703701. ISSN: 0146-0404.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 OS GENBANK-AF025480
 EM 199803
 ED Entered STN: 19980312

Entered Medline: 19980302

L4 ANSWER 349 OF 473 MEDLINE on STN
AN 1998051754 MEDLINE
DN PubMed ID: 9395572
TI Cellular calcium and sodium regulation, salt-sensitivity and essential hypertension in African Americans.
AU Aviv A
CS Hypertension Research Program, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark 07103-2714, USA.
NC HL34807 (NHLBI)
HL42856 (NHLBI)
SO Ethnicity & health, *(1996 Sep)* 1 (3) 275-81. Ref: 32
Journal code: 9608374. ISSN: 1355-7858.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199712
ED Entered STN: 19980122
Last Updated on STN: 19980122
Entered Medline: 19971231

L4 ANSWER 350 OF 473 MEDLINE on STN
AN 97476084 MEDLINE
DN PubMed ID: 9336335
TI Effect of cyclopiazonic acid on the force-frequency relationship in
human nonfailing myocardium.
AU Schwinger R H; Brixius K; Bavendiek U; Hoischen S; Muller-Ehmsen J; Bolck B; Erdmann E
CS Klinik III fur Innere Medizin der Universitat zu Koln, Germany.
SO Journal of pharmacology and experimental therapeutics, *(1997 Oct)* 283 (1) 286-92.
Journal code: 0376362. ISSN: 0022-3565.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199711
ED Entered STN: 19971224
Last Updated on STN: 19971224
Entered Medline: 19971103

L4 ANSWER 351 OF 473 MEDLINE on STN
AN 97471773 MEDLINE
DN PubMed ID: 9330714
TI Ca(2+)-signaling in cardiac myocytes: evidence from evolutionary and transgenic models.
AU Morad M; Suzuki Y J
CS Department of Pharmacology, Georgetown University Medical Center, Washington, DC 20007-2197, USA.
NC R01-16152
SO Advances in experimental medicine and biology, *(1997)* 430 3-12.
Ref: 13
Journal code: 0121103. ISSN: 0065-2598.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199711
ED Entered STN: 19971224
Last Updated on STN: 19971224
Entered Medline: 19971119

L4 ANSWER 352 OF 473 MEDLINE on STN
AN 97353731 MEDLINE
DN PubMed ID: 9209972
TI Role of intracellular sodium overload in the genesis of cardiac arrhythmias.
AU Levi A J; Dalton G R; Hancox J C; Mitcheson J S; Issberner J; Bates J A; Evans S J; Howarth F C; Hobai I A; Jones J V

SO Bristol, United Kingdom.. allan.levi@bristol.ac.uk
 Journal of cardiovascular electrophysiology, *** (1997 Jun)*** 8 (6)
 700-21. Ref: 209
 Journal code: 9010756. ISSN: 1045-3873.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199708
 ED Entered STN: 19970902
 Last Updated on STN: 19980206
 Entered Medline: 19970815

L4 ANSWER 353 OF 473 MEDLINE on STN
 AN 97346426 MEDLINE
 DN PubMed ID: 9202843
 TI Sodium-calcium exchange: recent advances.
 AU Hryshko L V; Philipson K D
 CS Division of Cardiovascular Sciences, St. Boniface General Hospital,
 Winnipeg, Manitoba, Canada.
 SO Basic-research in cardiology, *** (1997)*** 92 Suppl 1 45-51. Ref: 90
 Journal code: 0360342. ISSN: 0300-8428.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199708
 ED Entered STN: 19970908
 Last Updated on STN: 19980206
 Entered Medline: 19970827

L4 ANSWER 354 OF 473 MEDLINE on STN
 AN 97343141 MEDLINE
 DN PubMed ID: 9199770
 TI Electrophysiological characterization of ionic transport by the retinal
 exchanger expressed in ***human*** embryonic kidney cells.
 AU Navanglone A; Rispoli G; Gabellini N; Carafoli E
 CS Istituto Nazionale per la Fisica della Materia (INFM), Dipartimento di
 Biologia dell'Universita, Ferrara, Italy.
 SO Biophysical journal, *** (1997 Jul)*** 73 (1) 45-51.
 Journal code: 0370626. ISSN: 0006-3495.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199708
 ED Entered STN: 19970908
 Last Updated on STN: 19970908
 Entered Medline: 19970827

L4 ANSWER 355 OF 473 MEDLINE on STN
 AN 97338732 MEDLINE
 DN PubMed ID: 9195292
 TI Na(+)-Ca2+ exchanger: physiology and pharmacology.
 AU Matsuda T; Takuma K; Baba A
 CS Department of Pharmacology, Faculty of Pharmaceutical Sciences, Osaka
 University, Japan.
 SO Japanese journal of pharmacology, *** (1997 May)*** 74 (1) 1-20. Ref:
 277
 Journal code: 2983305R. ISSN: 0021-5198.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199708
 ED Entered STN: 19970813
 Last Updated on STN: 19980206
 Entered Medline: 19970805

AN 97289536 MEDLINE
DN PubMed ID: 9144441
TI Mechanism of calcium entry during axon injury and degeneration.
AU LoPachin R M; Lehning E J
CS Department of Anesthesiology, Montefiore Medical Center, Albert Einstein
College of Medicine, Bronx, New York 10467, USA.
SO Toxicology and applied pharmacology, *** (1997 Apr) *** 143 (2) 233-44.
Ref: 108
Journal code: 0416575. ISSN: 0041-008X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199706
ED Entered STN: 19970612
Last Updated on STN: 19980206
Entered Medline: 19970602

L4 ANSWER 357 OF 473 MEDLINE on STN
AN 97094294 MEDLINE
DN PubMed ID: 8940382
TI Possible role for mitochondrial calcium in angiotensin II- and
potassium-stimulated steroidogenesis in bovine adrenal glomerulosa cells.
AU Brandenburger Y; Kennedy E D; Python C P; Rossier M F; Vallotton M B;
Wollheim C B; Capponi A M
CS Division of Endocrinology and Diabetology, Faculty of Medicine, Geneva,
Switzerland.
SO Endocrinology, *** (1996 Dec) *** 137 (12) 5544-51.
Journal code: 0375040. ISSN: 0013-7227.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199701
ED Entered STN: 19970219
Last Updated on STN: 19980206
Entered Medline: 19970123

L4 ANSWER 358 OF 473 MEDLINE on STN
AN 97070613 MEDLINE
DN PubMed ID: 8913539
TI Distribution and signal transduction of angiotensin II AT1 and AT2
receptors.
AU Capponi A M
CS Division of Endocrinology, University Hospital, Geneva, Switzerland.
SO Blood pressure. Supplement, *** (1996) *** 2 41-6. Ref: 55
Journal code: 9300787. ISSN: 0803-8023.
CY Norway
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199703
ED Entered STN: 19970313
Last Updated on STN: 19970313
Entered Medline: 19970303

L4 ANSWER 359 OF 473 MEDLINE on STN
AN 97006060 MEDLINE
DN PubMed ID: 8853354
TI Contribution of Na⁺/Ca²⁺ exchange to action potential of ***human***
atrial myocytes.
AU Benardeau A; Hatem S N; Rucker-Martin C; Le Grand B; Mace L; Dervanian P;
Mercadier J J; Coraboeuf E
CS Laboratoire de Cardiologie Moléculaire et Cellulaire, Université de Paris
XI-Centre National de la Recherche Scientifique Unité de Recherche
Associée 1159, Hôpital Marie Lannelongue, Le Plessis Robinson, France.
SO American journal of physiology, *** (1996 Sep) *** 271 (3 Pt 2)
H1151-61.
Journal code: 0370511. ISSN: 0002-9513.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)

FS Priority Journals
EM 199612
ED Entered STN: 19970128
Last Updated on STN: 19980206
Entered Medline: 19961205

L4 ANSWER 360 OF 473 MEDLINE on STN
AN 96437036 MEDLINE
DN PubMed ID: 8839852
TI Affinity modulation of the platelet integrin alpha IIb beta 3 by
alpha-chymotrypsin: a possible role for Na⁺/Ca²⁺ exchanger.
AU Shiraga M; Tomiyama Y; Honda S; Kashiwagi H; Kosugi S; Handa M; Ikeda Y;
Kanakura Y; Kurata Y; Matsuzawa Y
CS Second Department of Internal Medicine, Osaka University Medical School,
Japan.
SO Blood, *** (1996 Oct 1) *** 88 (7) 2594-602.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199611
ED Entered STN: 19961219
Last Updated on STN: 19980206
Entered Medline: 19961107

L4 ANSWER 361 OF 473 MEDLINE on STN
AN 96382173 MEDLINE
DN PubMed ID: 8790037
TI Evidence for functional relevance of an enhanced expression of the
Na⁽⁺⁾-Ca²⁺ exchanger in failing ***human*** myocardium.
AU Flesch M; Schwinger R H; Schiffer F; Frank K; Sudkamp M; Kuhn-Regnier F;
Arnold G; Bohm M
CS Klinik III fur Innere Medizin Universitat zu Koln, FRG.
SO Circulation, *** (1996 Sep 1) *** 94 (5) 992-1002.
Journal code: 0147763. ISSN: 0009-7322.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199610
ED Entered STN: 19961025
Last Updated on STN: 19980206
Entered Medline: 19961017

L4 ANSWER 362 OF 473 MEDLINE on STN
AN 96372590 MEDLINE
DN PubMed ID: 8776405
TI The role of Na-Ca exchange current in the cardiac action potential.
AU Janvier N C; Boyett M R
CS Department of Physiology, University of Leeds, UK.
SO Cardiovascular research, *** (1996 Jul) *** 32 (1) 69-84. Ref: 74
Journal code: 0077427. ISSN: 0008-6363.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 199610
ED Entered STN: 19961106
Last Updated on STN: 19980206
Entered Medline: 19961024

L4 ANSWER 363 OF 473 MEDLINE on STN
AN 96285996 MEDLINE
DN PubMed ID: 8659814
TI 3rd International Conference on Sodium-Calcium Exchange. Woods Hole,
Massachusetts, April 23-26, 1995. Proceedings.
AU Anonymous
SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
1-589.
Journal code: 7506858. ISSN: 0077-8923.
CY United States
DT Conference; Conference Article; (CONGRESSES)

LA English
 FS Priority Journals
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19990129
 Entered Medline: 19960726

L4 ANSWER 364 OF 473 MEDLINE on STN
 AN 96250118 MEDLINE
 DN PubMed ID: 8659869
 TI Demonstration of an inward Na(+)-Ca2+ exchange current in adult
 human atrial myocytes.
 AU Li G R; Nattel S
 CS Research Center, Montreal Heart Institute, Quebec, Canada.
 SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
 525-8.
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19980206
 Entered Medline: 19960726

L4 ANSWER 365 OF 473 MEDLINE on STN
 AN 96250107 MEDLINE
 DN PubMed ID: 8659857
 TI Calcium in the cardiac diadic cleft. Implications for sodium-calcium
 exchange.
 AU Langer G A; Peskoff A
 CS Department of Medicine, University of California, Los Angeles School of
 Medicine 90095, USA.
 SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
 408-16. Ref: 24
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19980206
 Entered Medline: 19960726

L4 ANSWER 366 OF 473 MEDLINE on STN
 AN 96250066 MEDLINE
 DN PubMed ID: 8659816
 TI Expression of Na(+)-Ca2+ exchanger with modified C-terminal hydrophobic
 domains and enhanced activity.
 AU Gabellini N; Iwata T; Carafoli E
 CS Department of Biological Chemistry University of Padova, Italy.
 SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
 110-4. Ref: 9
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 OS GENBANK-Z49266
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19980206
 Entered Medline: 19960726

L4 ANSWER 367 OF 473 MEDLINE on STN
 AN 96250060 MEDLINE
 DN PubMed ID: 8659862
 TI Alternative splicing of the Na(+)-Ca2+ exchanger gene, NCX1.
 AU Schulze D H; Kofuji P; Valdivia C; He S; Luo S; Ruknudin A; Wisel S; Kirby

CS Department of Microbiology and Immunology, University of Maryland School
 of Medicine, Baltimore 21201, USA.
 SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
 46-57. Ref: 32
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 OS GENBANK-L39835
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19980206
 Entered Medline: 19960726

L4 ANSWER 368 OF 473 MEDLINE on STN
 AN 96250058 MEDLINE
 DN PubMed ID: 8659840
 TI The structural basis of Na(+)-Ca²⁺ exchange activity.
 AU Rahamimoff H; Low W; Cook O; Furman I; Kasir J; Vatashski R
 CS Department of Biochemistry Hebrew University-Hadassah Medical School
 Jerusalem, Israel.
 SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
 29-36. Ref: 16
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19980206
 Entered Medline: 19960726

L4 ANSWER 369 OF 473 MEDLINE on STN
 AN 96250056 MEDLINE
 DN PubMed ID: 8659882
 TI The molecular biology of the Na(+)-Ca²⁺ exchanger and its functional roles
 in heart, smooth muscle cells, neurons, glia, lymphocytes, and
 nonexcitable cells.
 AU Lederer W J; He s; Luo S; duBell W; Kofuji P; Kieval R; Neubauer C F;
 Ruknudin A; Cheng H; Cannell M B; Rogers T B; Schulze D H
 CS Department of Physiology, University of Maryland School of Medicine,
 Baltimore, Maryland 21201, USA.
 SO Annals of the New York Academy of Sciences, *** (1996 Apr 15) *** 779
 7-17. Ref: 60
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199607
 ED Entered STN: 19960808
 Last Updated on STN: 19980206
 Entered Medline: 19960726

L4 ANSWER 370 OF 473 MEDLINE on STN
 AN 96162572 MEDLINE
 DN PubMed ID: 8576853
 TI Species differences in the activity of the Na(+)-Ca²⁺ exchanger in
 mammalian cardiac myocytes.
 AU Sham J S; Hatem S N; Morad M
 CS Department of Pharmacology, Georgetown University Medical Center,
 Washington, DC 20007, USA.
 NC R01-HL16152 (NHLBI)
 SO Journal of physiology, *** (1995 Nov 1) *** 488 (Pt 3) 623-31.
 Journal code: 0266262. ISSN: 0022-3751.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)

FS Priority Journals
 EM 199603
 ED Entered STN: 19960321
 Last Updated on STN: 19980206
 Entered Medline: 19960312

L4 ANSWER 371 OF 473 MEDLINE on STN
 AN 95306881 MEDLINE
 DN PubMed ID: 7787264
 TI Recent insights into the regulation of cardiac Ca²⁺ flux during perinatal development and in cardiac failure.
 AU Fisher D J
 CS Texas Children's Hospital, Houston, USA.
 SO Current opinion in cardiology, *** (1995 Jan)*** 10 (1) 44-51. Ref: 75
 Journal code: 8608087. ISSN: 0268-4705.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199507
 ED Entered STN: 19950807
 Last Updated on STN: 19980206
 Entered Medline: 19950727

L4 ANSWER 372 OF 473 MEDLINE on STN
 AN 95306268 MEDLINE
 DN PubMed ID: 7786694
 TI New concepts in the cardioprotective action of magnesium and taurine during the calcium paradox and ischaemia of the heart.
 AU Suleiman M S
 CS Department of Physiology, University of Bristol, UK.
 SO Magnesium research : official organ of the International Society for the Development of Research on Magnesium, *** (1994 Dec)*** 7 (3-4) 295-312. Ref: 138
 Journal code: 8900948. ISSN: 0953-1424.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199507
 ED Entered STN: 19950807
 Last Updated on STN: 19980206
 Entered Medline: 19950724

L4 ANSWER 373 OF 473 MEDLINE on STN
 AN 95269801 MEDLINE
 DN PubMed ID: 7750570
 TI Specific inhibition of Na-Ca exchange function by antisense oligodeoxynucleotides.
 CM Erratum in: FEBS Lett 1995 Aug 21;370(3):280
 AU Lipp P; Schwaller B; Niggli E
 CS Department of Physiology, University of Bern, Switzerland.
 SO FEBS letters, *** (1995 May 8)*** 364 (2) 198-202.
 Journal code: 0155157. ISSN: 0014-5793.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199506
 ED Entered STN: 19950629
 Last Updated on STN: 19980206
 Entered Medline: 19950622

L4 ANSWER 374 OF 473 MEDLINE on STN
 AN 95202443 MEDLINE
 DN PubMed ID: 7895054
 TI Studies of the mechanism underlying increased Na⁺/Ca²⁺ exchange activity in Alzheimer's disease brain.
 AU Colvin R A; Davis N; Wu A; Murphy C A; Levengood J
 CS Department of Biological Sciences, Ohio University College of Osteopathic Medicine, Athens 45701.

SO Brain research, *** (1994 Dec 5) *** 665 (2) 192-200.
 Journal code: 0045503. ISSN: 0006-8993.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199504
 ED Entered STN: 19950504
 Last Updated on STN: 19980206
 Entered Medline: 19950425

L4 ANSWER 375 OF 473 MEDLINE on STN
 AN 95168956 MEDLINE
 DN PubMed ID: 7864717
 TI Heart failure: an update on pathophysiology.
 AU Drexler H
 CS Medizinische Klinik III, University of Freiburg, Germany.
 SO Archives des maladies du coeur et des vaisseaux, *** (1994 Jun) *** 87
 Spec No 2 13-6.
 Journal code: 0406011. ISSN: 0003-9683.
 CY France
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199503
 ED Entered STN: 19950404
 Last Updated on STN: 20000303
 Entered Medline: 19950323

L4 ANSWER 376 OF 473 MEDLINE on STN
 AN 95150354 MEDLINE
 DN PubMed ID: 7847687
 TI Ion transport systems and Ca²⁺ regulation in aging neurons.
 AU Michaelis M L
 CS Department of Pharmacology, University of Kansas, Lawrence 66045.
 SO Annals of the New York Academy of Sciences, *** (1994 Dec 15) *** 747
 407-18. Ref: 52
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199503
 ED Entered STN: 19950316
 Last Updated on STN: 19980206
 Entered Medline: 19950308

L4 ANSWER 377 OF 473 MEDLINE on STN
 AN 95150189 MEDLINE
 DN PubMed ID: 7847532
 TI Role of the sodium-calcium exchange mechanism and the effect of magnesium
 on sodium-free and high-potassium contractures in pregnant ***human***
 myometrium.
 AU Morishita F; Kawarabayashi T; Sakamoto Y; Shirakawa K
 CS Department of Obstetrics and Gynecology, School of Medicine, Fukuoka
 University, Japan.
 SO American journal of obstetrics and gynecology, *** (1995 Jan) *** 172 (1
 Pt 1) 186-95.
 Journal code: 0370476. ISSN: 0002-9378.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199503
 ED Entered STN: 19950316
 Last Updated on STN: 19980206
 Entered Medline: 19950309

L4 ANSWER 378 OF 473 MEDLINE on STN
 AN 95123339 MEDLINE
 DN PubMed ID: 7823035
 TI Na⁺/Ca²⁺ antiport in the mammalian heart.
 AU Reeves J P; Condrescu M; Chernaya G; Gardner J P

Medical School, Newark 07103.
 SO Journal of experimental biology, *** (1994 Nov) *** 196 375-88. Ref: 40
 Journal code: 0243705. ISSN: 0022-0949.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199502
 ED Entered STN: 19950223
 Last Updated on STN: 19980206
 Entered Medline: 19950216

L4 ANSWER 379 OF 473 MEDLINE on STN
 AN 95123334 MEDLINE
 DN PubMed ID: 7823030
 TI Cation antiports of animal plasma membranes.
 AU Grinstein S; Wieczorek H
 CS Division of Cell Biology, Hospital for Sick Children, Toronto, Canada.
 SO Journal of experimental biology, *** (1994 Nov) *** 196 307-18. Ref: 41
 Journal code: 0243705. ISSN: 0022-0949.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199502
 ED Entered STN: 19950223
 Last Updated on STN: 19980206
 Entered Medline: 19950216

L4 ANSWER 380 OF 473 MEDLINE on STN
 AN 95116246 MEDLINE
 DN PubMed ID: 7816552
 TI A novel two-compartment culture dish allows microscopic evaluation of two
 different treatments in one cell culture simultaneously. Influence of
 external pH on Na⁺/Ca²⁺ exchanger activity in cultured rat cardiomyocytes.
 AU Atsma D E; Bastiaanse E M; Ince C; van der Laarse A
 CS Department of Cardiology, University Hospital, Leiden, The Netherlands.
 SO Pflugers Archiv : European journal of physiology, *** (1994 Oct) *** 428
 (3-4) 296-9.
 Journal code: 0154720. ISSN: 0031-6768.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199502
 ED Entered STN: 19950217
 Last Updated on STN: 19980206
 Entered Medline: 19950208

L4 ANSWER 381 OF 473 MEDLINE on STN
 AN 95103184 MEDLINE
 DN PubMed ID: 7804751
 TI Crosstalk and epithelial ion transport.
 AU Harvey B J
 CS Department of Physiology, University College Cork, Ireland.
 SO Current opinion in nephrology and hypertension, *** (1994 Sep) *** 3 (5)
 523-8.
 Journal code: 9303753. ISSN: 1062-4821.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199502
 ED Entered STN: 19950215
 Last Updated on STN: 19980206
 Entered Medline: 19950202

L4 ANSWER 382 OF 473 MEDLINE on STN
 AN 95097406 MEDLINE
 DN PubMed ID: 7799453
 TI Comparison of the action potential prolonging and positive inotropic

myocardium.
AU Hoey A; Amos G J; Ravens U
CS Department of Pharmacology, University of Essen, Germany.
SO Journal of molecular and cellular cardiology, *** (1994 Aug) *** 26 (8)
985-94.
Journal code: 0262322. ISSN: 0022-2828.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199501
ED Entered STN: 19950215
Last Updated on STN: 19980206
Entered Medline: 19950125

L4 ANSWER 383 OF 473 MEDLINE on STN
AN 95081902 MEDLINE
DN PubMed ID: 7527459
TI Inhibition of Ca²⁺ entry by Ca²⁺ overloading of intracellular Ca²⁺ stores
in ***human*** platelets.
AU Kimura M; Cho J H; Reeves J P; Aviv A
CS Hypertension Research Center, University of Medicine and Dentistry of New
Jersey, New Jersey Medical School, Newark 07103-2714.
NC HL34807 (NHLBI)
HL42856 (NHLBI)
HL49932 (NHLBI)
SO Journal of physiology, *** (1994 Aug 15) *** 479 (Pt 1) 1-10.
Journal code: 0266262. ISSN: 0022-3751.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199501
ED Entered STN: 19950124
Last Updated on STN: 19980206
Entered Medline: 19950111

L4 ANSWER 384 OF 473 MEDLINE on STN
AN 95077943 MEDLINE
DN PubMed ID: 7986536
TI Mammalian exchangers and co-transporters.
AU Reithmeier R A
CS Department of Medicine, University of Toronto, Canada.
SO Current opinion in cell biology, *** (1994 Aug) *** 6 (4) 583-94. Ref:
106
Journal code: 8913428. ISSN: 0955-0674.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 199501
ED Entered STN: 19950124
Last Updated on STN: 19980206
Entered Medline: 19950111

L4 ANSWER 385 OF 473 MEDLINE on STN
AN 95054028 MEDLINE
DN PubMed ID: 7964733
TI Characterization of exchange inhibitory peptide effects on Na⁺/Ca²⁺
exchange in rat and ***human*** brain plasma membrane vesicles.
AU Wu A; Colvin R A
CS Department of Biological Sciences, Ohio University College of Osteopathic
Medicine, Athens 45701.
NC NS30384 (NINDS)
SO Journal of neurochemistry, *** (1994 Dec) *** 63 (6) 2136-43.
Journal code: 2985190R. ISSN: 0022-3042.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199412
ED Entered STN: 19950110
Last Updated on STN: 19980206

L4 ANSWER 386 OF 473 MEDLINE on STN
 AN 95051546 MEDLINE
 DN PubMed ID: 7962546
 TI Na⁺/Ca²⁺ exchange-mediated calcium entry in ***human*** lymphocytes.
 AU Balasubramanyam M; Rohowsky-Kochan C; Reeves J P; Gardner J P
 CS Hypertension Research Center, University of Medicine and Dentistry-New
 Jersey Medical School, Newark 07103.
 NC HL44196 (NHLBI)
 HL49932 (NHLBI)
 SO Journal of clinical investigation, *** (1994 Nov)*** 94 (5) 2002-8.
 Journal code: 7802877. ISSN: 0021-9738.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199412
 ED Entered STN: 19950110
 Last Updated on STN: 19980206
 Entered Medline: 19941202

L4 ANSWER 387 OF 473 MEDLINE on STN
 AN 94367220 MEDLINE
 DN PubMed ID: 8085015
 TI The cellular actions of digitalis glycosides on the heart.
 AU Levi A J; Boyett M R; Lee C O
 CS Department of Physiology, School of Medical Sciences, University of
 Bristol, University Walk, U.K.
 SO Progress in biophysics and molecular biology, *** (1994)*** 62 (1)
 1-54. Ref: 228
 Journal code: 0401233. ISSN: 0079-6107.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199410
 ED Entered STN: 19941021
 Last Updated on STN: 19980206
 Entered Medline: 19941010

L4 ANSWER 388 OF 473 MEDLINE on STN
 AN 94363504 MEDLINE
 DN PubMed ID: 7521769
 TI Cyclic nucleotides inhibit Na⁺/Ca²⁺ exchange in cultured ***human***
 mesangial cells.
 AU Mene P; Pugliese F; Cinotti G A
 CS Chair of Nephrology, University of Rome La Sapienza, Italy.
 SO Experimental nephrology, *** (1993 Jul-Aug)*** 1 (4) 245-52.
 Journal code: 9302239. ISSN: 1018-7782.
 CY Switzerland
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199410
 ED Entered STN: 19941021
 Last Updated on STN: 19980206
 Entered Medline: 19941013

L4 ANSWER 389 OF 473 MEDLINE on STN
 AN 94346468 MEDLINE
 DN PubMed ID: 8067429
 TI Furazolidone increases thapsigargin-sensitive Ca(2+)-ATPase in chick
 cardiac myocytes.
 AU Lax D; Martinez-Zaguilan R; Gillies R J
 CS Department of Pediatrics, Steele Memorial Children's Research Center,
 Tucson, Arizona.
 SO American journal of physiology, *** (1994 Aug)*** 267 (2 Pt 2) H734-41.
 Journal code: 0370511. ISSN: 0002-9513.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199409

Last Updated on STN: 19980206
Entered Medline: 19940921

L4 ANSWER 390 OF 473 MEDLINE on STN
AN 94340771 MEDLINE
DN PubMed ID: 8062418
TI Gene expression of the cardiac Na(+)-Ca2+ exchanger in end-stage
human heart failure.
AU Studer R; Reinecke H; Bilger J; Eschenhagen T; Bohm M; Hasenfuss G; Just
H; Holtz J; Drexler H
CS Arbeitsgruppe Molekulare Kardiologie, Universitat Freiburg, Germany.
SO Circulation research, *** (1994 Sep) *** 75 (3) 443-53.
Journal code: 0047103. ISSN: 0009-7330.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199409
ED Entered STN: 19941005
Last Updated on STN: 19980206
Entered Medline: 19940920

L4 ANSWER 391 OF 473 MEDLINE on STN
AN 94292759 MEDLINE
DN PubMed ID: 8021471
TI Differences in platelet calcium regulation between African Americans and
Caucasians: implications for the predisposition of African Americans to
essential hypertension.
AU Kimura M; Cho J H; Lasker N; Aviv A
CS Hypertension Research Center, University of Medicine and Dentistry of New
Jersey, New Jersey Medical School, Newark 07103-2714.
NC HL34807 (NHLBI)
HL42856 (NHLBI)
SO Journal of hypertension, *** (1994 Feb) *** 12 (2) 199-207.
Journal code: 8306882. ISSN: 0263-6352.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199407
ED Entered STN: 19940815
Last Updated on STN: 19980206
Entered Medline: 19940729

L4 ANSWER 392 OF 473 MEDLINE on STN
AN 94260944 MEDLINE
DN PubMed ID: 8201934
TI [Energetics of ionic behavior in heart muscle contraction. Physiologic and
physiopathologic aspects].
Energetica del comportamiento ionico en la contraccion muscular cardiaca.
Aspectos fisiologicos y fisiopatologicos.
AU Ponce-Hornos J E; Bonazzola P; Taquini A C
CS Instituto de Investigaciones Cardiológicas, Facultad de Medicina,
Universidad de Buenos Aires.
SO Medicina, *** (1993) *** 53 (5) 445-58. Ref: 52
Journal code: 0204271. ISSN: 0025-7680.
CY Argentina
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA Spanish
FS Priority Journals
EM 199407
ED Entered STN: 19940714
Last Updated on STN: 19940714
Entered Medline: 19940705

L4 ANSWER 393 OF 473 MEDLINE on STN
AN 94232511 MEDLINE
DN PubMed ID: 8177473
TI Increased cytosolic free sodium in platelets from patients with
early-stage chronic renal failure.
AU Tepel M; Bauer S; Kegel M; Raffelsiefer A; Wischniowski H; Zidek W
CS Medizinische Universitäts-Poliklinik, University of Munster, Germany.
SO Nephrology, dialysis, transplantation : official publication of the

*** (1994) *** 9 (1) 27-34.
 Journal code: 8706402. ISSN: 0931-0509.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199406
 ED Entered STN: 19940620
 Last Updated on STN: 19980206
 Entered Medline: 19940606

L4 ANSWER 394 OF 473 MEDLINE on STN
 AN 94133698 MEDLINE
 DN PubMed ID: 7508043
 TI Na⁺, K⁽⁺⁾-ATPase and Na⁺/Ca²⁺ exchange isoforms: physiological and
 physiopathological relevance.
 AU Decollogne S; Bertrand I B; Ascensio M; Drubaix I; Lelievre L G
 CS Laboratoire de Pharmacologie des Transports Ioniques Membranaires,
 Universite Paris 7, France.
 SO Journal of cardiovascular pharmacology, *** (1993) *** 22 Suppl 2 S96-8.
 Ref: 29
 Journal code: 7902492. ISSN: 0160-2446.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199403
 ED Entered STN: 19940318
 Last Updated on STN: 20000303
 Entered Medline: 19940310

L4 ANSWER 395 OF 473 MEDLINE on STN
 AN 94126946 MEDLINE
 DN PubMed ID: 8296399
 TI Modulation of intramitochondrial free Ca²⁺ concentration by antagonists of
 Na⁽⁺⁾-Ca²⁺ exchange.
 AU Cox D A; Matlib M A
 CS Lilly Research Laboratories, Indianapolis, IN 46285.
 NC T32-HL07382 (NHLBI)
 SO Trends in pharmacological sciences, *** (1993 Nov) *** 14 (11) 408-13.
 Ref: 39
 Journal code: 7906158. ISSN: 0165-6147.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199403
 ED Entered STN: 19940314
 Last Updated on STN: 19980206
 Entered Medline: 19940303

L4 ANSWER 396 OF 473 MEDLINE on STN
 AN 94101659 MEDLINE
 DN PubMed ID: 8275516
 TI Reconstructing the heart: a challenge for integrative physiology.
 AU Noble D; Bett G
 CS University Laboratory of Physiology, Oxford, United Kingdom.
 SO Cardiovascular research, *** (1993 Oct) *** 27 (10) 1701-12.
 Journal code: 0077427. ISSN: 0008-6363.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199402
 ED Entered STN: 19940218
 Last Updated on STN: 19980206
 Entered Medline: 19940204

L4 ANSWER 397 OF 473 MEDLINE on STN
 AN 94091534 MEDLINE
 DN PubMed ID: 8267157

main pulmonary artery.
 AU Abdalla S S; Laravuso R B; Will J A
 CS Department of Animal Health, University of Wisconsin, Madison 53706.
 SO Anesthesia and analgesia, *** (1994 Jan) *** 78 (1) 17-22.
 Journal code: 1310650. ISSN: 0003-2999.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199401
 ED Entered STN: 19940209
 Last Updated on STN: 19980206
 Entered Medline: 19940125

L4 ANSWER 398 OF 473 MEDLINE on STN
 AN 94081304 MEDLINE
 DN PubMed ID: 8258673
 TI Na(+)-Ca²⁺ exchange modulates Ca²⁺ handling of ***human*** platelets
 by altering intracellular Ca²⁺ store size.
 AU Ishida T; Matsuura H; Ishida-Kainouchi M; Ozono R; Watanabe M; Kajiyama G;
 Oshima T
 CS First Department of Internal Medicine, Hiroshima University School of
 Medicine, Japan.
 SO Journal of hypertension, *** (1993 Oct) *** 11 (10) 1089-95.
 Journal code: 8306882. ISSN: 0263-6352.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199401
 ED Entered STN: 19940203
 Last Updated on STN: 19980206
 Entered Medline: 19940119

L4 ANSWER 399 OF 473 MEDLINE on STN
 AN 94016601 MEDLINE
 DN PubMed ID: 8411189
 TI Is "fuzzy space" necessary for Ca²⁺ extrusion on the Na(+)-Ca⁺ exchanger
 in cardiac myocytes?
 CM Comment on: J Mol Cell Cardiol. 1993 Jun;25(6):637-9. PubMed ID: 8411188
 AU Barry W H
 NC HL30478 (NHLBI)
 HL42535 (NHLBI)
 SO Journal of molecular and cellular cardiology, *** (1993 Jun) *** 25 (6)
 641-3; discussion 645-6.
 Journal code: 0262322. ISSN: 0022-2828.
 CY ENGLAND: United Kingdom
 DT Commentary
 Editorial
 LA English
 FS Priority Journals
 EM 199311
 ED Entered STN: 19940117
 Last Updated on STN: 20030114
 Entered Medline: 19931104

L4 ANSWER 400 OF 473 MEDLINE on STN
 AN 94016600 MEDLINE
 DN PubMed ID: 8411188
 TI How does the Na(+)-Ca²⁺ exchanger work in the intact cardiac cell?
 CM Comment in: J Mol Cell Cardiol. 1993 Jun;25(6):641-3; discussion 645-6.
 PubMed ID: 8411189
 AU Langer G A; Peskoff A; Post J A
 NC HL 28539-10 (NHLBI)
 SO Journal of molecular and cellular cardiology, *** (1993 Jun) *** 25 (6)
 637-9.
 Journal code: 0262322. ISSN: 0022-2828.
 CY ENGLAND: United Kingdom
 DT Editorial
 LA English
 FS Priority Journals
 EM 199311
 ED Entered STN: 19940117
 Last Updated on STN: 20030114
 Entered Medline: 19931104

L4 ANSWER 401 OF 473 MEDLINE on STN
 AN 94016522 MEDLINE
 DN PubMed ID: 8411123
 TI Platelet activating factor-induced increase in cytosolic calcium and
 transmembrane current in ***human*** macrophages.
 AU Katnik C; Nelson D J
 CS University of Chicago, Dept. of Neurology, Illinois 60637.
 SO Journal of membrane biology, *** (1993 Jun) *** 134 (3) 213-24.
 Journal code: 0211301. ISSN: 0022-2631.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199310
 ED Entered STN: 19940117
 Last Updated on STN: 19980206
 Entered Medline: 19931022

L4 ANSWER 402 OF 473 MEDLINE on STN
 AN 93278803 MEDLINE
 DN PubMed ID: 8389258
 TI Intracellular calcium homeostasis in cardiac myocytes.
 AU Barry W H; Bridge J H
 CS Division of Cardiology, University of Utah School of Medicine, Salt Lake
 City.
 SO Circulation, *** (1993 Jun) *** 87 (6) 1806-15. Ref: 87
 Journal code: 0147763. ISSN: 0009-7322.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199307
 ED Entered STN: 19930716
 Last Updated on STN: 19980206
 Entered Medline: 19930702

L4 ANSWER 403 OF 473 MEDLINE on STN
 AN 93226470 MEDLINE
 DN PubMed ID: 8385772
 TI Regulation of the cytosolic pH set point for activation of the Na⁺/H⁺
 antiport in ***human*** platelets: the roles of the Na⁺/Ca²⁺ exchange,
 the Na⁺(+)-K⁺(+)-2Cl⁻ cotransport and cellular volume.
 AU Kimura M; Aviv A
 CS Hypertension Research Center, University of Medicine and Dentistry of
 NJ-NJ Medical School, Newark 07103-2714.
 NC HL34807 (NHLBI)
 HL42856 (NHLBI)
 SO Pflugers Archiv : European journal of physiology, *** (1993 Mar) *** 422
 (6) 585-90.
 Journal code: 0154720. ISSN: 0031-6768.
 CY GERMANY: Germany, Federal Republic of
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199305
 ED Entered STN: 19930521
 Last Updated on STN: 19980206
 Entered Medline: 19930507

L4 ANSWER 404 OF 473 MEDLINE on STN
 AN 93167758 MEDLINE
 DN PubMed ID: 7679565
 TI Molecular dissection of the myelinated axon.
 AU Waxman S G; Ritchie J M
 CS Department of Neurology, Yale University School of Medicine, New Haven,
 CT.
 SO Annals of neurology, *** (1993 Feb) *** 33 (2) 121-36. Ref: 172
 Journal code: 7707449. ISSN: 0364-5134.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English

EM 199303
 ED Entered STN: 19930402
 Last Updated on STN: 19980206
 Entered Medline: 19930316

L4 ANSWER 405 OF 473 MEDLINE on STN
 AN 93110167 MEDLINE
 DN PubMed ID: 8417464
 TI Anoxic injury of central myelinated axons: ionic mechanisms and pharmacology.
 AU Ransom B R; Waxman S G; Stys P K
 CS Department of Neurology, Yale University School of Medicine, New Haven, Connecticut 06510.
 SO Research publications - Association for Research in Nervous and Mental Disease, *** (1993) *** 71 121-51. Ref: 91
 Journal code: 7505942. ISSN: 0091-7443.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199301
 ED Entered STN: 19930212
 Last Updated on STN: 19980206
 Entered Medline: 19930126

L4 ANSWER 406 OF 473 MEDLINE on STN
 AN 93042766 MEDLINE
 DN PubMed ID: 1384746
 TI The impact of single cell voltage clamp on the understanding of the cardiac ventricular action potential.
 AU Varro A; Papp J G
 CS Department of Pharmacology, Albert Szent-Gyorgyi Medical University, Szeged, Hungary.
 SO Cardioscience, *** (1992 Sep) *** 3 (3) 131-44. Ref: 139
 Journal code: 9014943. ISSN: 1015-5007.
 CY Italy
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199212
 ED Entered STN: 19930122
 Last Updated on STN: 19980206
 Entered Medline: 19921222

L4 ANSWER 407 OF 473 MEDLINE on STN
 AN 93040297 MEDLINE
 DN PubMed ID: 1419049
 TI Sodium-calcium exchange.
 AU Philipson K D; Nicoll D A
 CS University of California, Los Angeles.
 SO Current opinion in cell biology, *** (1992 Aug) *** 4 (4) 678-83. Ref: 45
 Journal code: 8913428. ISSN: 0955-0674.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199212
 ED Entered STN: 19930122
 Last Updated on STN: 19980206
 Entered Medline: 19921204

L4 ANSWER 408 OF 473 MEDLINE on STN
 AN 92374100 MEDLINE
 DN PubMed ID: 1507528
 TI Regulation of vascular smooth muscle contractility: roles of the sarcoplasmic reticulum (SR) and the ***sodium*** / ***calcium*** ***exchanger***
 AU Blaustein M P; Ambesi A; Bloch R J; Goldman W F; Juhaszova M; Lindenmayer

CS Department of Physiology, University of Maryland School of Medicine,
 Baltimore 21201.
 NC HL-42040 (NHLBI)
 HL-43091 (NHLBI)
 HL-45215 (NHLBI)
 +
 SO Japanese journal of pharmacology, *** (1992) *** 58 Suppl 2 107P-114P.
 Ref: 42
 Journal code: 2983305R. ISSN: 0021-5198.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199209
 ED Entered STN: 19921009
 Last Updated on STN: 19980206
 Entered Medline: 19920918

L4 ANSWER 409 OF 473 MEDLINE on STN
 AN 92259790 MEDLINE
 DN PubMed ID: 1374773
 TI Role of sodium in mediator release from ***human*** basophils.
 AU Smith T F; Sanchez-Legrand F; McKean L P; Kutner M H; Cragoe E J Jr; Eaton
 D C
 CS Division of Allergy, Immunology, Emory University School of Medicine,
 Atlanta, Ga.
 NC AI21072 (NIAID)
 SO7RRO5364 (NCRR)
 SO Journal of allergy and clinical immunology, *** (1992 May) *** 89 (5)
 978-86.
 Journal code: 1275002. ISSN: 0091-6749.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199206
 ED Entered STN: 19920626
 Last Updated on STN: 19980206
 Entered Medline: 19920616

L4 ANSWER 410 OF 473 MEDLINE on STN
 AN 92168293 MEDLINE
 DN PubMed ID: 1371600
 TI Molecular aspects of glutamate receptors and sodium-calcium exchange
 carriers in mammalian brain: implications for neuronal development and
 degeneration.
 AU Michaelis E K; Michaelis M L
 CS Department of Pharmacology and Toxicology, University of Kansas, Lawrence
 66047.
 NC AA 04732 (NIAAA)
 AG 04762 (NIA)
 SO Neurochemical research, *** (1992 Jan) *** 17 (1) 29-34. Ref: 36
 Journal code: 7613461. ISSN: 0364-3190.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199204
 ED Entered STN: 19920417
 Last Updated on STN: 19980206
 Entered Medline: 19920402

L4 ANSWER 411 OF 473 MEDLINE on STN
 AN 92152801 MEDLINE
 DN PubMed ID: 1785898
 TI Is stoichiometry constant in Na-Ca exchange?..
 AU Mullins L J
 CS Department of Biophysics, University of Maryland School of Medicine,
 Baltimore 21201.
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 96-8.
 Journal code: 7506858. ISSN: 0077-8923.

DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 412 OF 473 MEDLINE on STN
 AN 92152800 MEDLINE
 DN PubMed ID: 1785897
 TI Mechanism of partial reactions in the cardiac Na(+)-Ca²⁺ exchange system.
 AU Khananshvilii D
 CS Department of Biochemistry, Weizmann Institute of Science, Rehovot, Israel.
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 85-95.
 Ref: 26
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 413 OF 473 MEDLINE on STN
 AN 92152795 MEDLINE
 DN PubMed ID: 1785893
 TI Characterization of Na(+)-Ca²⁺ exchange in the beta cell.
 AU Hoenig M; Culberson L H; Wheeler C A; Ferguson D C
 CS Department of Physiology and Pharmacology, College of Veterinary Medicine, University of Georgia, Athens 30602.
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 657-9.
 Ref: 11
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 414 OF 473 MEDLINE on STN
 AN 92152794 MEDLINE
 DN PubMed ID: 1785892
 TI Sodium-calcium exchange in the pancreatic B cell.
 AU Herchuelz A; Plasman P O
 CS Laboratoire de Pharmacodynamie et de Therapeutique, Universite Libre de Bruxelles, Faculte de Medecine, Belgium.
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 642-56.
 Ref: 77
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 415 OF 473 MEDLINE on STN
 AN 92152792 MEDLINE
 DN PubMed ID: 1664709
 TI The role of Na(+)-Ca²⁺ exchange in ***human*** neutrophil function.

CS Department of Medicine, Veterans Administration Medical Center, St. Louis,
 Missouri 63106.
 NC GM-38094 (NIGMS)
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 616-30.
 Ref: 40
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 416 OF 473 MEDLINE on STN
 AN 92152788 MEDLINE
 DN PubMed ID: 1785887
 TI The role of Na-Ca exchange in renal epithelia. An overview.
 AU Windhager E E; Frindt G; Milovanovic S
 CS Department of Physiology and Biophysics, Cornell University Medical
 College, New York, New York 10021.
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 577-91.
 Ref: 49
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 417 OF 473 MEDLINE on STN
 AN 92152779 MEDLINE
 DN PubMed ID: 1785880
 TI Role of sarcolemmal membrane sodium-calcium exchange in vascular smooth
 muscle tension.
 AU Matlib M A
 CS Department of Pharmacology and Cell Biophysics, University of Cincinnati
 College of Medicine, Ohio 45267-0575.
 NC RO1-HL34664 (NHLBI)
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 531-42.
 Ref: 80
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 418 OF 473 MEDLINE on STN
 AN 92152778 MEDLINE
 DN PubMed ID: 1785879
 TI Evidence for Na-Ca exchange in ***human*** resistance arteries.
 AU Aaronson P I; Poston L; Woolfson R G; Smirnov S V
 CS United Medical School, St. Thomas' Hospital, London, United Kingdom.
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 521-30.
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405

Entered Medline: 19920317

L4 ANSWER 419 OF 473 MEDLINE on STN
AN 92152777 MEDLINE
DN PubMed ID: 1785878
TI Sodium-calcium exchange in aortic myocytes and renal epithelial cells.
Dependence on metabolic energy and intracellular sodium.
AU Smith J B; Lyu R M; Smith L
CS Department of Pharmacology, School of Medicine, University of Alabama,
Birmingham 35294.
NC DK39258 (NIDDK)
HL44408 (NHLBI)
SO Annals of the New York Academy of Sciences, *** (1991) *** 639 505-20.
Ref: 42
Journal code: 7506858. ISSN: 0077-8923.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199203
ED Entered STN: 19920405
Last Updated on STN: 19980206
Entered Medline: 19920317

L4 ANSWER 420 OF 473 MEDLINE on STN
AN 92152753 MEDLINE
DN PubMed ID: 1785858
TI Na(+)-Ca²⁺ exchange activity is increased in Alzheimer's disease brain
tissues.
AU Colvin R A; Bennett J W; Colvin S L
CS Department of Zoological and Biomedical Sciences, Ohio University College
of Osteopathic Medicine, Athens 45701.
SO Annals of the New York Academy of Sciences, *** (1991) *** 639 325-7.
Journal code: 7506858. ISSN: 0077-8923.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199203
ED Entered STN: 19920405
Last Updated on STN: 19980206
Entered Medline: 19920317

L4 ANSWER 421 OF 473 MEDLINE on STN
AN 92152752 MEDLINE
DN PubMed ID: 1785857
TI Neuron-specific and state-specific differences in calcium regulation.
Their role in the development of neuronal architecture.
AU Mills L R
CS Playfair Neuroscience Unit, University of Toronto, Ontario, Canada.
NC NS15350 (NINDS)
NS24683 (NINDS)
SO Annals of the New York Academy of Sciences, *** (1991) *** 639 312-24.
Ref: 48
Journal code: 7506858. ISSN: 0077-8923.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199203
ED Entered STN: 19920405
Last Updated on STN: 19980206
Entered Medline: 19920317

L4 ANSWER 422 OF 473 MEDLINE on STN
AN 92152749 MEDLINE
DN PubMed ID: 1785854
TI Sodium-calcium exchange and phototransduction in retinal photoreceptors.
AU Yau K W; Nakatani K; Tamura T
CS Howard Hughes Medical Institute, Baltimore, Maryland.
NC EY 06837 (NEI)

Ref: 36
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 423 OF 473 MEDLINE on STN
 AN 92152727 MEDLINE
 DN PubMed ID: 1785834
 TI Regulation of Na-Ca exchange. An overview.
 AU DiPolo R; Beauge L
 CS Centro de Biofísica y Bioquímica, IVIC, Caracas, Venezuela.
 NC R01 HL-39243-03 (NHLBI)
 SO Annals of the New York Academy of Sciences, *** (1991) *** 639 100-11.
 Ref: 26
 Journal code: 7506858. ISSN: 0077-8923.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199203
 ED Entered STN: 19920405
 Last Updated on STN: 19980206
 Entered Medline: 19920317

L4 ANSWER 424 OF 473 MEDLINE on STN
 AN 91355993 MEDLINE
 DN PubMed ID: 2151738
 TI Plasma membrane Ca²⁺ pumps and Na⁺/Ca²⁺ exchangers.
 AU Strehler E E
 CS Laboratory for Biochemistry, Swiss Federal Institute of Technology, Zurich.
 SO Seminars in cell biology, *** (1990 Aug) *** 1 (4) 283-95. Ref: 104
 Journal code: 9007587. ISSN: 1043-4682.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LA English
 FS Priority Journals
 EM 199110
 ED Entered STN: 19911027
 Last Updated on STN: 19980206
 Entered Medline: 19911008

L4 ANSWER 425 OF 473 MEDLINE on STN
 AN 91317885 MEDLINE
 DN PubMed ID: 1650372
 TI Characterization of calcium transport by basal plasma membranes from
 human placental syncytiotrophoblast.
 AU Lafond J; Leclerc M; Brunette M G
 CS Maisonneuve-Rosemont Hospital, Montreal, Quebec, Canada.
 SO Journal of cellular physiology, *** (1991 Jul) *** 148 (1) 17-23.
 Journal code: 0050222. ISSN: 0021-9541.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199109
 ED Entered STN: 19910922
 Last Updated on STN: 19980206
 Entered Medline: 19910905

L4 ANSWER 426 OF 473 MEDLINE on STN
 AN 91274932 MEDLINE
 DN PubMed ID: 1647256

tissues.

AU Colvin R A; Bennett J W; Colvin S L; Allen R A; Martinez J; Miner G D
CS Department of Zoological and Biomedical Sciences, Ohio University College
of Osteopathic Medicine, Athens 45701.

SO Brain research, *** (1991 Mar 8) *** 543 (1) 139-47.
Journal code: 0045503. ISSN: 0006-8993.

CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199108
ED Entered STN: 19910818
Last Updated on STN: 19980206
Entered Medline: 19910801

L4 ANSWER 427 OF 473 MEDLINE on STN
AN 91176440 MEDLINE
DN PubMed ID: 1826093
TI Inhibitor action on placental calcium transport.

AU Williams J M; Abramovich D R; Dacke C G; Mayhew T M; Page K R
CS Department of Anatomy, University of Aberdeen, Marischal College, United
Kingdom.

SO Calcified tissue international, *** (1991 Jan) *** 48 (1) 7-12.
Journal code: 7905481. ISSN: 0171-967X.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199104
ED Entered STN: 19910519
Last Updated on STN: 19980206
Entered Medline: 19910426

L4 ANSWER 428 OF 473 MEDLINE on STN
AN 91162935 MEDLINE
DN PubMed ID: 2074662
TI Identification and characteristics of a Na⁺/Ca²⁺ exchanger in cultured
human mesangial cells.

AU Mene P; Pugliese F; Faraggiana T; Cinotti G A
CS Cattedra di Nefrologia Medica, University of Rome La Sapienza, Italy.

SO Kidney international, *** (1990 Dec) *** 38 (6) 1199-205.
Journal code: 0323470. ISSN: 0085-2538.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199104
ED Entered STN: 19910505
Last Updated on STN: 19980206
Entered Medline: 19910418

L4 ANSWER 429 OF 473 MEDLINE on STN
AN 91109877 MEDLINE
DN PubMed ID: 1703282
TI Characterization of Na(+) -Ca²⁺ exchange activity in plasma membrane
vesicles from postmortem ***human*** brain.

AU Hoel G; Michaelis M L; Freed W J; Kleinman J E
CS Department of Pharmacology and Toxicology, University of Kansas, Lawrence
66047.

NC AA 04732 (NIAAA)
AG04762 (NIA)

SO Neurochemical research, *** (1990 Sep) *** 15 (9) 881-7.
Journal code: 7613461. ISSN: 0364-3190.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199102
ED Entered STN: 19910329
Last Updated on STN: 19980206
Entered Medline: 19910228

L4 ANSWER 430 OF 473 MEDLINE on STN
AN 90355219 MEDLINE
DN PubMed ID: 2167385

calcium paradox.
CM Comment on: J Mol Cell Cardiol. 1990 May;22(5):499-501. PubMed ID: 2167384
AU Chapman R a
CS British Heart Foundation Research Group in Cellular Cardiology, Department
of Physiology, School of Veterinary Science, Bristol, England.
SO Journal of molecular and cellular cardiology, *** (1990 May) *** 22 (5)
503-5.
Journal code: 0262322. ISSN: 0022-2828.
CY ENGLAND: United Kingdom
DT Commentary
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199009
ED Entered STN: 19901026
Last Updated on STN: 19980206
Entered Medline: 19900927

L4 ANSWER 431 OF 473 MEDLINE on STN
AN 90355218 MEDLINE
DN PubMed ID: 2167384
TI Is an increase of intracellular Na⁺ during Ca²⁺ depletion essential for
the occurrence of the calcium paradox?
CM Comment in: J Mol Cell Cardiol. 1990 May;22(5):503-5. PubMed ID: 2167385
AU Ruigrok T J
CS Department of Cardiology, University Hospital, Utrecht, The Netherlands.
SO Journal of molecular and cellular cardiology, *** (1990 May) *** 22 (5)
499-501.
Journal code: 0262322. ISSN: 0022-2828.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199009
ED Entered STN: 19901026
Last Updated on STN: 19980206
Entered Medline: 19900927

L4 ANSWER 432 OF 473 MEDLINE on STN
AN 90325890 MEDLINE
DN PubMed ID: 1973777
TI Na(+)-Ca²⁺ exchanger and cardiac contraction.
AU Anonymous
SO Lancet, *** (1990 Jul 28) *** 336 (8709) 219-20.
Journal code: 2985213R. ISSN: 0140-6736.
CY ENGLAND: United Kingdom
DT Editorial
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199008
ED Entered STN: 19901012
Last Updated on STN: 19980206
Entered Medline: 19900827

L4 ANSWER 433 OF 473 MEDLINE on STN
AN 90284028 MEDLINE
DN PubMed ID: 2191788
TI The cardiac Na(+)-Ca²⁺ exchanger: dependence on membrane environment.
AU Philipson K D
CS Department of Medicine, UCLA School of Medicine 90024-1760.
SO Cell biology international reports, *** (1990 Apr) *** 14 (4) 305-9.
Ref: 20
Journal code: 7708050. ISSN: 0309-1651.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199007
ED Entered STN: 19900824
Last Updated on STN: 19980206
Entered Medline: 19900726

L4 ANSWER 434 OF 473 MEDLINE on STN

DN PubMed ID: 2335019
 TI Canine cardiac sarcolemmal vesicles demonstrate rapid initial Na(+)-Ca2+ exchange activity.
 AU Gruver C L; Katz A M; Messineo F C
 CS Department of Medicine, University of Connecticut Health Center, Farmington 06032.
 NC HL-07420 (NHLBI)
 HL-33026 (NHLBI)
 SO Circulation research, *** (1990 May)*** 66 (5) 1171-7.
 Journal code: 0047103. ISSN: 0009-7330.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199006
 ED Entered STN: 19900706
 Last Updated on STN: 19980206
 Entered Medline: 19900611

L4 ANSWER 435 OF 473 MEDLINE on STN
 AN 90193175 MEDLINE
 DN PubMed ID: 2156295
 TI Aspects of hepatic calcium metabolism.
 AU Heilmann C; Spamer C; Gerok W
 SO Progress in liver diseases, *** (1990)*** 9 261-79. Ref: 159
 Journal code: 0376447. ISSN: 1060-913X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 199004
 ED Entered STN: 19900601
 Last Updated on STN: 19980206
 Entered Medline: 19900419

L4 ANSWER 436 OF 473 MEDLINE on STN
 AN 89384166 MEDLINE
 DN PubMed ID: 2550727
 TI Sodium-calcium and sodium-proton exchangers in red blood cells.
 AU Parker J C
 NC AM 11357 (NIADDK)
 SO Methods in enzymology, *** (1989)*** 173 292-300.
 Journal code: 0212271. ISSN: 0076-6879.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198910
 ED Entered STN: 19900309
 Last Updated on STN: 19980206
 Entered Medline: 19891026

L4 ANSWER 437 OF 473 MEDLINE on STN
 AN 89103446 MEDLINE
 DN PubMed ID: 2912132
 TI Relationship between cytosolic free Ca2+ and Na+-Ca2+ exchange in aortic muscle cells.
 AU Smith J B; Zheng T; Smith L
 CS Department of Pharmacology, University of Alabama, Birmingham 35294.
 NC DK-39258 (NIDDK)
 HL-01671 (NHLBI)
 SO American journal of physiology, *** (1989 Jan)*** 256 (1 Pt 1) C147-54.
 Journal code: 0370511. ISSN: 0002-9513.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198902
 ED Entered STN: 19900308
 Last Updated on STN: 19980206
 Entered Medline: 19890221

L4 ANSWER 438 OF 473 MEDLINE on STN

DN PubMed ID: 3213678
TI Sodium-calcium exchange in platelet plasma membrane vesicles.
AU Rengasamy A; Feinberg H
CS Department of Pharmacology, University of Illinois College of Medicine,
Chicago.
SO Advances in experimental medicine and biology, *** (1988) *** 232 105-8.
Journal code: 0121103. ISSN: 0065-2598.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198902
ED Entered STN: 19900308
Last Updated on STN: 19980206
Entered Medline: 19890216

L4 ANSWER 439 OF 473 MEDLINE on STN
AN 88057421 MEDLINE
DN PubMed ID: 2445679
TI Vascular muscle membrane cation mechanisms and total peripheral
resistance.
AU Hermsmeyer R K
CS Department of Pharmacology, University of Iowa, Iowa City.
NC HL 14388 (NHLBI)
HL 16328 (NHLBI)
SO Hypertension, *** (1987 Nov) *** 10 (5 Pt 2) I20-2. Ref: 28
Journal code: 7906255. ISSN: 0194-911X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 198801
ED Entered STN: 19900305
Last Updated on STN: 19980206
Entered Medline: 19880104

L4 ANSWER 440 OF 473 MEDLINE on STN
AN 86308026 MEDLINE
DN PubMed ID: 2943901
TI The homeostasis of calcium in heart cells.
AU Carafoli E
SO Journal of molecular and cellular cardiology, *** (1985 Mar) *** 17 (3)
203-12.
Journal code: 0262322. ISSN: 0022-2828.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198610
ED Entered STN: 19900321
Last Updated on STN: 19980206
Entered Medline: 19861023

L4 ANSWER 441 OF 473 MEDLINE on STN
AN 85197812 MEDLINE
DN PubMed ID: 3888080
TI Sodium-calcium exchange in plasma membrane vesicles.
AU Philipson K D
SO Annual review of physiology, *** (1985) *** 47 561-71. Ref: 56
Journal code: 0370600. ISSN: 0066-4278.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 198505
ED Entered STN: 19900320
Last Updated on STN: 19980206
Entered Medline: 19850528

L4 ANSWER 442 OF 473 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS
RESERVED. on STN
AN 1999-0448929 PASCAL

TIEN Sodium/calcium exchange contributes to contraction and relaxation in failed ***human*** ventricular myocytes
 AU GAUGHAN J. P.; FURUKAWA S.; JEEVANANDAM V.; HEFNER C. A.; KUBO H.; MARGULIES K. B.; MCGOWAN B. S.; MATTIELLO J. A.; DIPLA K.; PIACENTINO V. III; SIYUN LI; HOUSER S. R.
 CS Departments of Physiology and Cardio-Thoracic Surgery, Temple University School of Medicine, Philadelphia, Pennsylvania 19140, United States
 SO American journal of physiology. Heart and circulatory physiology, *** (1999) *** , 46(2), H714-H724, 30 refs.
 ISSN: 0363-6135 CODEN: AJPPDI
 DT Journal
 BL Analytic
 CY United States
 LA English
 AV INIST-670D, 354000089395720340

L4 ANSWER 443 OF 473 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED. on STN
 AN 1998-0057087 PASCAL
 CP Copyright .COPYRGT. 1998 INIST-CNRS. All rights reserved.
 TIEN Molecular biology of calcium channels in the cardiovascular system
 AU KATZ A. M.
 DZAU Victor J. (ed.)
 CS Cardiology Division, University of Connecticut Health Center, Farmington, Connecticut, United States
 Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts, United States; Harvard Medical School, Boston, Massachusetts, United States
 SO The American journal of cardiology, *** (1997) *** , 80(9A), 17I-22I, 25 refs.
 Conference: New Approaches to Cardiovascular Therapy. Symposium, Anaheim, California (United States), 15 Mar 1997
 ISSN: 0002-9149 CODEN: AJCDAG
 DT Journal; Conference
 BL Analytic
 CY United States
 LA English
 AV INIST-8674, 354000079384920030

L4 ANSWER 444 OF 473 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED. on STN
 AN 1996-0272799 PASCAL
 CP Copyright .COPYRGT. 1996 INIST-CNRS. All rights reserved.
 TIEN Pathophysiological targets for beta-blocker therapy in congestive heart failure
 AU JUST H.
 TAYLOR S. H. (ed.)
 CS Medizinische Universitaetsklinik Freiburg im Breisgau Abteilung Innere Medizin III/Kardiologie, Angiologie, Germany, Federal Republic of
 University Department of Cardiovascular Studies, Department of Medical Cardiology, The General Infirmary, Leeds, United Kingdom
 European Society of Cardiology. Drug Therapy Working Group, EUR (patr.)
 SO European heart journal, *** (1996) *** , 17(APR, SUPB), 1-7 [6 p.], 5 refs.
 Conference: Beta-blockers in heart failure -- myths and realities. Satellite symposium, Berlin (Germany, Federal Republic of), 13 Sep 1994
 ISSN: 0195-668X
 DT Journal; Conference
 BL Analytic
 CY United Kingdom
 LA English
 AV INIST-18785, 354000043212540010

L4 ANSWER 445 OF 473 PHIN COPYRIGHT 2004 PJB on STN
 AN 1998:4227 PHIN
 DN B00570226
 DED 1 Feb 1998
 TI Physiome Sciences Inc.: Matters of the Heart
 SO Bioventure-View (***1998***) No. 1302 p14
 DT Newsletter
 FS FULL

L4 ANSWER 446 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 2001:704332 SCISEARCH

TI Patients with end-stage congestive heart failure treated with
 beta-adrenergic receptor antagonists have improved ventricular myocyte
 calcium regulatory protein abundance
 AU Kubo H; Margulies K B; Piacentino V; Gaughan J P; Houser S R (Reprint)
 CS Temple Univ, Sch Med, Dept Physiol, Cardiovasc Res Grp, 3400 N Broad St,
 Philadelphia, PA 19140 USA (Reprint); Temple Univ, Sch Med, Dept Physiol,
 Cardiovasc Res Grp, Philadelphia, PA 19140 USA; Temple Univ, Sch Med,
 Cardiol Sect, Philadelphia, PA 19140 USA
 CYA USA
 SO CIRCULATION, (****28 AUG 2001***) Vol. 104, No. 9, pp. 1012-1018.
 Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA
 19106-3621 USA.
 ISSN: 0009-7322.
 DT Article; Journal
 LA English
 REC Reference Count: 35
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 447 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 2000:743512 SCISEARCH
 GA The Genuine Article (R) Number: 358FK
 TI Na⁺-K⁺-ATPase alpha 2-isoform expression in guinea pig hearts during
 transition from compensation to decompensation
 AU Trouve P; Carre F; Belikova I; Leclercq C; Dakhli T; Soufir L; Coquard I;
 RamirezGil J; Charlemagne D (Reprint)
 CS UNIV DENIS DIDEROT, IFR CIRCULAT LARIBOISIÈRE, INSERM, U127, 41 BLVD
 CHAPELLE, F-75475 PARIS, FRANCE (Reprint); UNIV DENIS DIDEROT, IFR
 CIRCULAT LARIBOISIÈRE, INSERM, U127, F-75475 PARIS, FRANCE; CTR HOSP REG &
 UNIV RENNES, F-35033 RENNES, FRANCE
 CYA FRANCE
 SO AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY, (***OCT:
 *** 2000***) Vol. 279, No. 4, pp. H1972-H1981.
 Publisher: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD
 20814.
 ISSN: 0363-6135.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 49
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 448 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 1999:698408 SCISEARCH
 GA The Genuine Article (R) Number: 233YJ
 TI Increased expression of the Na⁺/Ca²⁺ exchanger in the rat heart after
 immobilization stress is not induced by cortisol
 AU Zacikova L; Kvetnansky R; Krizanova O (Reprint)
 CS SLOVAK ACAD SCI, INST MOL PHYSIOL & GENET, VLARSKA 5, BRATISLAVA 83334,
 SLOVAKIA (Reprint); SLOVAK ACAD SCI, INST MOL PHYSIOL & GENET, BRATISLAVA
 83334, SLOVAKIA; SLOVAK ACAD SCI, INST EXPT ENDOCRINOL, BRATISLAVA,
 SLOVAKIA
 CYA SLOVAKIA
 SO FEBS LETTERS, (***3 SEP 1999***) Vol. 457, No. 3, pp. 423-428.
 Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM,
 NETHERLANDS.
 ISSN: 0014-5793.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 41
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 449 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 1999:682827 SCISEARCH
 GA The Genuine Article (R) Number: 231YE
 TI Physiological and molecular characterization of the Na⁺/Ca²⁺ exchanger in
 human platelets
 AU Kimura M (Reprint); Jeanclos E M; Donnelly R J; Lytton J; Reeves J P; Aviv
 A
 CS UNIV MED & DENT NEW JERSEY, HYPERTENS RES CTR, NEW JERSEY MED SCH, MSB RM
 F-464, 185 S ORANGE AVE, NEWARK, NJ 07103 (Reprint); UNIV MED & DENT NEW
 JERSEY, MOL RESOURCE FACIL, NEW JERSEY MED SCH, NEWARK, NJ 07103; UNIV MED
 & DENT NEW JERSEY, DEPT PHARMACOL & PHYSIOL, NEW JERSEY MED SCH, NEWARK,
 NJ 07103; UNIV CALGARY, HLTH SCI CTR, DEPT BIOCHEM & MOL BIOL, CALGARY, AB
 T2N 4N1, CANADA

SO AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY, (***SEP:
 *** 1999***) Vol. 46, No. 3, pp. H911-H917.
 Publisher: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD
 20814.
 ISSN: 0363-6135.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 31
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 450 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 1999:621920 SCISEARCH
 GA The Genuine Article (R) Number: 223XA
 TI Sodium/calcium exchange contributes to contraction and relaxation in
 failed ***human*** ventricular myocytes
 AU Gaughan J P (Reprint); Furukawa S; Jeevanandam V; Hefner C A; Kubo H;
 Margulies K B; McGowan B S; Mattiello J A; Dipla K; Piacentino V; Li S Y;
 Houser S R
 CS TEMPLE UNIV, SCH MED, DEPT PHYSIOL, 3420 N BROAD ST, PHILADELPHIA, PA
 19140 (Reprint); TEMPLE UNIV, SCH MED, DEPT CARDIOTHORAC SURG,
 PHILADELPHIA, PA 19140
 CYA USA
 SO AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY, (***AUG:
 *** 1999***) Vol. 46, No. 2, pp. H714-H724.
 Publisher: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD
 20814.
 ISSN: 0363-6135.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 30
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 451 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 1999:337223 SCISEARCH
 GA The Genuine Article (R) Number: 189VE
 TI Transmembrane regulation of intracellular calcium by a plasma membrane
 sodium / ***calcium*** ***exchanger*** in mouse ova
 AU Pepperell J R (Reprint); Kommineni K; Buradagunta S; Smith P J S; Keefe D
 L
 CS BROWN UNIV, WOMEN & INFANTS HOSP, DEPT OBSTET & GYNECOL, 101 DUDLEY ST,
 PROVIDENCE, RI 02905 (Reprint); WOODS HOLE OCEANOGRAPHIC INST, BIOL MARINE LAB,
 WOODS HOLE, MA 02543
 CYA USA
 SO BIOLOGY OF REPRODUCTION, (***MAY 1999***) Vol. 60, No. 5, pp.
 1137-1143.
 Publisher: SOC STUDY REPRODUCTION, 1603 MONROE ST, MADISON, WI 53711-2021.
 ISSN: 0006-3363.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 40
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 452 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 1998:516471 SCISEARCH
 GA The Genuine Article (R) Number: ZX213
 TI Ionic mechanisms underlying ***human*** atrial action potential
 properties: insights from a mathematical model
 AU Courtemanche M (Reprint); Ramirez R J; Nattel S
 CS MONTREAL HEART INST, RES CTR, 5000 E BELANGER ST, MONTREAL, PQ H1T 1C8,
 CANADA (Reprint); UNIV MONTREAL, DEPT PHYSIOL, MONTREAL, PQ H3C 3J7,
 CANADA; UNIV MONTREAL, DEPT MED, MONTREAL, PQ H3C 3J7, CANADA; MCGILL
 UNIV, DEPT PHARMACOL, MONTREAL, PQ H3G 1Y6, CANADA
 CYA CANADA
 SO AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY, (***JUL:
 *** 1998***) Vol. 44, No. 1, pp. H301-H321.
 Publisher: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD
 20814.
 ISSN: 0363-6135.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 64

L4 ANSWER 453 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 97:543597 SCISEARCH
 GA The Genuine Article (R) Number: XK487
 TI Na+/Ca2+ exchanger in Drosophila: Cloning, expression, and transport differences
 AU Ruknudin A; Valdivia C; Kofuji P; Lederer W J; Schulze D H (Reprint)
 CS UNIV MARYLAND, SCH MED, DEPT MICROBIOL & IMMUNOL, 655 W BALTIMORE ST, BALTIMORE, MD 21201 (Reprint); UNIV MARYLAND, SCH MED, DEPT MICROBIOL & IMMUNOL, BALTIMORE, MD 21201; UNIV MARYLAND, SCH MED, DEPT PHYSIOL, BALTIMORE, MD 21201; UNIV MARYLAND, SCH MED, DEPT PHARMACOL & EXPT THERAPEUT, BALTIMORE, MD 21201; CTR MED BIOTECHNOL, BALTIMORE, MD 21201
 CYA USA
 SO AMERICAN JOURNAL OF PHYSIOLOGY-CELL PHYSIOLOGY, (***JUL 1997***) Vol. 42, No. 1, pp. C257-C265.
 Publisher: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
 ISSN: 0363-6143.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 34
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 454 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 96:798258 SCISEARCH
 GA The Genuine Article (R) Number: VN119
 TI RELATIONSHIP BETWEEN DIASTOLIC FUNCTION AND PROTEIN-LEVELS OF
 SODIUM - ***CALCIUM*** - ***EXCHANGER*** IN END-STAGE FAILING
 HUMAN HEARTS
 AU HASENFUSS G (Reprint); PREUSS M; LEHNART S; PRESTLE J; MEYER M; JUST H
 CS UNIV FREIBURG, D-7800 FREIBURG, GERMANY
 CYA GERMANY
 SO CIRCULATION, (***15 OCT 1996***) Vol. 94, No. 8, Supp. S, pp. 2527.
 ISSN: 0009-7322.
 DT Conference; Journal
 FS LIFE; CLIN
 LA ENGLISH
 REC No References

L4 ANSWER 455 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 94:471364 SCISEARCH
 GA The Genuine Article (R) Number: NX999
 TI THE ***HUMAN*** CARDIAC ***SODIUM*** - ***CALCIUM***
 EXCHANGER EXPRESSED IN SF9 CELLS
 AU NIGGLI E (Reprint); LIPP P; KOFUJI P; SCHULZE D H; LEDERER W J
 CS UNIV BERN, DEPT PHYSIOL, CH-3012 BERN, SWITZERLAND; UNIV MARYLAND, DEPT PHYSIOL, BALTIMORE, MD, 21201; UNIV MARYLAND, DEPT MICROBIOL, BALTIMORE, MD, 21201
 CYA SWITZERLAND; USA
 SO JOURNAL OF PHYSIOLOGY-LONDON, (***JUN 1994***) Vol. 477P, pp. P17.
 ISSN: 0022-3751.
 DT Conference; Journal
 FS LIFE
 LA ENGLISH
 REC Reference Count: 4

L4 ANSWER 456 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 93:558095 SCISEARCH
 GA The Genuine Article (R) Number: LW031
 TI KINETICS OF CALCIUM-TRANSPORT ACROSS THE LYMPHOCYTE PLASMA-MEMBRANE
 AU BALASUBRAMANYAM M; KIMURA M; AVIV A; GARDNER J P (Reprint)
 CS UNIV MED & DENT NEW JERSEY, NEW JERSEY MED SCH, HYPERTENS RES CTR, 185 S ORANGE AVE, NEWARK, NJ, 07103; UNIV MED & DENT NEW JERSEY, NEW JERSEY MED SCH, DEPT PHYSIOL, NEWARK, NJ, 07103; UNIV MED & DENT NEW JERSEY, NEW JERSEY MED SCH, DEPT PEDIAT, NEWARK, NJ, 07103
 CYA USA
 SO AMERICAN JOURNAL OF PHYSIOLOGY, (***AUG 1993***) Vol. 265, No. 2, Part 1, pp. C321-C327.
 ISSN: 0002-9513.
 DT Article; Journal
 FS LIFE
 LA ENGLISH
 REC Reference Count: 32
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 457 OF 473 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
 AN 92:44626 SCISEARCH
 GA The Genuine Article (R) Number: GY960
 TI THE GUANINE NUCLEOTIDE-BINDING PROTEIN-GS ACTIVATES A NOVEL CALCIUM
 TRANSPORTER IN XENOPUS OOCYTES
 AU MURPHY P M (Reprint); MCDERMOTT D
 CS NIAID, HOST DEF LAB, BLDG 10, RM 11N113, BETHESDA, MD, 20892 (Reprint)
 CYA USA
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (***15 JAN 1992***) Vol. 267, No. 2,
 pp. 883-888.
 ISSN: 0021-9258.
 DT Article; Journal
 FS LIFE
 LA ENGLISH
 REC Reference Count: 39
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 458 OF 473 USPATFULL on STN
 AN 2001:221067 USPATFULL
 TI Inhibition of noninactivating Na channels of mammalian optic nerve as a
 means of preventing optic nerve degeneration associated with glaucoma
 IN Adorante, Joseph S., Irvine, CA, United States
 PA Allergan Sales, Inc., Irvine, CA, United States (U.S. corporation)
 PI US 6326389 B1 20011204 <--
 AI US 1999-273832 19990322 (9)
 RLI Continuation-in-part of Ser. No. US 1997-827194, filed on 27 Mar 1997,
 now patented, Pat. No. US 5922746
 DT Utility
 FS GRANTED
 LN.CNT 387
 INCL INCLM: 514/373.000
 INCLS: 514/912.000
 NCL NCLM: 514/373.000
 NCLS: 514/912.000
 IC [7]
 ICM: A61K031-425
 EXF 514/373; 514/912
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 459 OF 473 USPATFULL on STN
 AN 2001:67794 USPATFULL
 TI ***Human*** respiratory syncytial virus peptides with antifusogenic
 and antiviral activities
 IN Barney, Shawn O'Lin, Cary, NC, United States
 Lambert, Dennis Michael, Cary, NC, United States
 Petteway, Stephen Robert, Cary, NC, United States
 PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
 PI US 6228983 B1 20010508 <--
 AI US 1995-485264 19950607 (8)
 RLI Division of Ser. No. US 1995-470896, filed on 6 Jun 1995
 Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994
 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994
 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now
 patented, Pat. No. US 5464933
 DT Utility
 FS Granted
 LN.CNT 32166
 INCL INCLM: 530/300.000
 INCLS: 530/324.000; 530/325.000; 530/326.000; 424/211.100; 424/186.100
 NCL NCLM: 530/300.000
 NCLS: 424/186.100; 424/211.100; 530/324.000; 530/325.000; 530/326.000
 IC [7]
 ICM: A61K038-00
 EXF 530/350; 530/324-329; 530/300; 424/211.1
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 460 OF 473 USPATFULL on STN
 AN 2001:52073 USPATFULL
 TI Use of nicorandil in treatment of sexual dysfunction or for enhancement
 of sexual function in mammals including ***humans***
 IN Saxena, Ajit, Uttar Pradesh, IN, United States
 Bakhle, Dhananjay Sadashiv, Mumbai, IN, United States
 PA Lupin Laboratories Limited, Mumbai, India (non-U.S. corporation)
 PI US 6214849 B1 20010410 <--
 AI US 1999-326052 19990604 (9)

DT Utility
FS Granted
LN.CNT 1169
INCL INCLM: 514/355.000
INCLS: 514/906.000
NCL NCLM: 514/355.000
NCLS: 514/906.000
IC [7]
ICM: A61P015-10
ICS: A61K031-4406
EXF 514/355; 514/906; 514/356
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 461 OF 473 USPATFULL on STN
AN 2000:28005 USPATFULL
TI Method for protection of heart by limiting metabolic and ionic abnormalities developed during ischemia following ischemia or resulting from ischemia
IN Ramasamy, Ravichandran, Davis, CA, United States
Schaefer, Saul, Davis, CA, United States
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
PI US 6034109 20000307 <--
AI US 1998-118521 19980717 (9)
RLI Division of Ser. No. US 1995-574899, filed on 19 Dec 1995, now patented, Pat. No. US 5834466 which is a continuation-in-part of Ser. No. US 1994-362400, filed on 22 Dec 1994, now abandoned
DT Utility
FS Granted
LN.CNT 1591
INCL INCLM: 514/345.000
INCLS: 514/429.000; 514/471.000; 514/646.000
NCL NCLM: 514/345.000
NCLS: 514/429.000; 514/471.000; 514/646.000
IC [7]
ICM: A61K031-44
ICS: A61K031-40; A61K031-34; A61K031-135
EXF 514/471; 514/429; 514/646; 514/345
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 462 OF 473 USPATFULL on STN
AN 1999:155719 USPATFULL
TI Method of inhibiting proliferation of cells by administering an aminosterol compound
IN Zasloff, Michael, Merion Station, PA, United States
Shinnar, Ann, Teaneck, NJ, United States
Kinney, William, Churchville, PA, United States
Rao, Meena, Horsham, PA, United States
PA Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, United States (U.S. corporation)
PI US 5994336 19991130 <--
AI US 1995-479455 19950607 (8)
DT Utility
FS Granted
LN.CNT 3505
INCL INCLM: 514/182.000
NCL NCLM: 514/182.000
IC [6]
ICM: A61K031-575
EXF 514/182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 463 OF 473 USPATFULL on STN
AN 1999:78751 USPATFULL
TI Inhibition of noninactivating Na channels of mammalian optic nerve as a means of preventing optic nerve degeneration associated with glaucoma
IN Adorante, Joseph S., Irvine, CA, United States
PA Allergan, Waco, TX, United States (U.S. corporation)
PI US 5922746 19990713 <--
AI US 1997-827194 19970327 (8)
DT Utility
FS Granted
LN.CNT 424
INCL INCLM: 514/373.000
INCLS: 514/912.000

IC NCLS: 514/912.000
[6]
ICM: A61K031-425
EXF 514/373; 514/912
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 464 OF 473 USPATFULL on STN
AN 1999:24813 USPATFULL
TI Certain aminosterol compounds and pharmaceutical compositions including
these compounds
IN Jones, Steven, West Chester, PA, United States
PA Magainin Pharmaceuticals, Inc., Plymouth Meeting, PA, United States
(U.S. corporation)
PI US 5874597 19990223 <--
AI US 1995-476855 19950607 (8)
DT Utility
FS Granted
LN.CNT 3435
INCL INCLM: 552/521.000
NCL NCLM: 552/521.000
IC [6]
ICM: C07J041-00
EXF 552/521; 514/182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 465 OF 473 USPATFULL on STN
AN 1998:154470 USPATFULL
TI Certain aminosterol compounds and pharmaceutical compositions including
these compounds
IN Zasloff, Michael, Merion Station, PA, United States
Shinnar, Ann, Teaneck, NJ, United States
Kinney, William, Churchville, PA, United States
Jones, Steven, West Chester, PA, United States
PA Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, United States (U.S.
corporation)
PI US 5847172 19981208 <--
AI US 1995-487443 19950607 (8)
DT Utility
FS Granted
LN.CNT 3533
INCL INCLM: 552/521.000
NCL NCLM: 552/521.000
IC [6]
ICM: C07J041-00
EXF 552/521
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 466 OF 473 USPATFULL on STN
AN 1998:147645 USPATFULL
TI Aminosterol compounds useful as inhibitors of the sodium/proton
exchanger (NHE)
IN Zasloff, Michael, Merion Station, PA, United States
Shinnar, Ann, Teaneck, NJ, United States
Rao, Meena, Horsham, PA, United States
Kinney, William, Churchville, PA, United States
PA Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, United States (U.S.
corporation)
PI US 5840936 19981124 <--
AI US 1995-475572 19950607 (8)
DT Utility
FS Granted
LN.CNT 3497
INCL INCLM: 552/521.000
INCLS: 558/029.000
NCL NCLM: 552/521.000
NCLS: 558/029.000
IC [6]
ICM: C07C305-12
ICS: C07J041-00
EXF 552/521; 558/29
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 467 OF 473 USPATFULL on STN
AN 1998:147455 USPATFULL
TI Aminosterol compounds and a method of treating infection using the

IN Zasloff, Michael, Merion Station, PA, United States
 Shinnar, Ann, Teaneck, NJ, United States
 Kinney, William, Churchville, PA, United States
 Rao, Meena, Horsham, PA, United States
 PA Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, United States (U.S. corporation)
 PI US 5840740 19981124 <--
 AI US 1995-483059 19950607 (8)
 DT Utility
 FS Granted
 LN.CNT 3513
 INCL INCLM: 514/182.000
 INCLS: 552/521.000
 NCL NCLM: 514/182.000
 NCLS: 552/521.000
 IC [6]
 ICM: A01K031-575
 ICS: A07J041-00
 EXF 552/521; 514/182
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 468 OF 473 USPATFULL on STN
 AN 1998:138899 USPATFULL
 TI Method for protecting of heart by limiting metabolic and ionic abnormalities developed during ischemia, following ischemia or resulting from ischemia
 IN Ramasamy, Ravichandran, Davis, CA, United States
 PA Schaefer, Saul, Davis, CA, United States
 The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
 PI US 5834466 19981110 <--
 AI US 1995-574899 19951219 (8)
 RLI Continuation-in-part of Ser. No. US 1994-362400, filed on 22 Dec 1994, now abandoned
 DT Utility
 FS Granted
 LN.CNT 1609
 INCL INCLM: 514/227.500
 INCLS: 514/248.000; 514/356.000
 NCL NCLM: 514/227.500
 NCLS: 514/248.000; 514/356.000
 IC [6]
 ICM: A61K031-54
 ICS: A61K031-495; A61K031-44
 EXF 514/356; 514/227.5; 514/248
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 469 OF 473 USPATFULL on STN
 AN 1998:98909 USPATFULL
 TI Method of inhibiting proliferation of cells by administering an aminosterol compound
 IN Zasloff, Michael, Merion Station, PA, United States
 Shinnar, Ann, Teaneck, NJ, United States
 Kinney, William, Churchville, PA, United States
 Anderson, Mark, Norristown, PA, United States
 Williams, Jon, Robbinsville, NJ, United States
 McLane, Michael, Lansdale, PA, United States
 PA Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, United States (U.S. corporation)
 PI US 5795885 19980818 <--
 AI US 1995-483057 19950607 (8)
 DT Utility
 FS Granted
 LN.CNT 3513
 INCL INCLM: 514/182.000
 NCL NCLM: 514/182.000
 IC [6]
 ICM: A61K031-56
 EXF 514/182
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 470 OF 473 USPATFULL on STN
 AN 1998:95412 USPATFULL
 TI Method of inhibiting the sodium/proton exchanger NHE3 and method of inhibiting growth by administering squalamine

PA Magainin Pharmaceuticals, Inc., Plymouth Meeting, PA, United States
 (U.S. corporation)
 PI US 5792635 19980811 <--
 AI US 1995-474799 19950607 (8)
 DT Utility
 FS Granted
 LN.CNT 3485
 INCL INCLM: 435/184.000
 INCLS: 514/182.000; 552/521.000
 NCL NCLM: 435/184.000
 NCLS: 514/182.000; 552/521.000
 IC [6]
 ICM: C12N009-99
 ICS: A61K031-56
 EXF 435/184; 514/182; 552/521
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 471 OF 473 USPATFULL on STN
 AN 1998:65213 USPATFULL
 TI Method of treating a viral infection by administering a steroid compound
 IN Zasloff, Michael, Merion Station, PA, United States
 PA Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, United States (U.S. corporation)
 PI US 5763430 19980609 <--
 AI US 1995-479457 19950607 (8)
 DT Utility
 FS Granted
 LN.CNT 3495
 INCL INCLM: 514/169.000
 INCLS: 514/170.000; 514/171.000; 514/172.000; 514/173.000; 514/174.000;
 514/175.000; 514/176.000; 514/177.000; 514/178.000; 514/179.000;
 514/180.000; 514/181.000; 514/182.000
 NCL NCLM: 514/169.000
 NCLS: 514/170.000; 514/171.000; 514/172.000; 514/173.000; 514/174.000;
 514/175.000; 514/176.000; 514/177.000; 514/178.000; 514/179.000;
 514/180.000; 514/181.000; 514/182.000
 IC [6]
 ICM: A61K031-56
 ICS: A61K031-565; A61K031-57; A61K031-58
 EXF 514/169; 514/170; 514/171; 514/172; 514/173; 514/174; 514/175; 514/176;
 514/177; 514/178; 514/179; 514/180; 514/181; 514/182
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 472 OF 473 USPATFULL on STN
 AN 97:109916 USPATFULL
 TI Compounds having both potent calcium antagonist and antioxidant activity
 and use thereof as cytoprotective agents
 IN Hellberg, Mark R., Arlington, TX, United States
 Barnes, George, Arlington, TX, United States
 Collier, Jr., Robert J., Arlington, TX, United States
 PA Alcon Laboratories, Inc., Fort Worth, TX, United States (U.S. corporation)
 PI US 5691360 19971125 <--
 AI US 1995-471550 19950606 (8)
 RLI Division of Ser. No. US 1993-164267, filed on 8 Dec 1993, now patented,
 Pat. No. US 5424321
 DT Utility
 FS Granted
 LN.CNT 765
 INCL INCLM: 514/337.000
 INCLS: 514/338.000
 NCL NCLM: 514/337.000
 NCLS: 514/338.000
 IC [6]
 ICM: A61K031-44
 EXF 514/337; 514/338
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 473 OF 473 USPATFULL on STN
 AN 97:59207 USPATFULL
 TI Compounds having both potent calcium antagonist and antioxidant activity
 and use thereof as cytoprotective agents
 IN Hellberg, Mark R., Arlington, TX, United States
 Barnes, George, Arlington, TX, United States
 Collier, Jr., Robert J., Arlington, TX, United States

corporation)
PI US 5646149 19970708 <--
AI US 1995-472685 19950607 (8)
RLI Continuation of Ser. No. US 1993-163980, filed on 8 Dec 1993, now
abandoned
DT Utility
FS Granted
LN.CNT 1610
INCL INCLM: 514/253.000
INCLS: 514/255.000; 514/292.000; 514/317.000; 514/320.000; 514/323.000;
514/324.000; 514/331.000; 544/361.000; 544/372.000; 544/376.000;
544/377.000; 544/396.000; 546/086.000; 546/192.000; 546/197.000;
546/200.000; 546/202.000; 546/230.000; 546/240.000
NCL NCLM: 514/254.110
NCLS: 514/292.000; 514/317.000; 514/320.000; 514/323.000; 514/324.000;
514/331.000; 544/361.000; 544/372.000; 544/376.000; 544/377.000;
544/396.000; 546/086.000; 546/192.000; 546/197.000; 546/200.000;
546/202.000; 546/230.000; 546/240.000
IC [6]
ICM: A61K031-495
ICS: A61K031-445; C07D405-06; C07D411-06
EXF 544/376; 544/377; 514/253
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> S SLC8A
53 FILES SEARCHED...
L5 1 SLC8A

=> D L5

L5 ANSWER 1 OF 1 USPATFULL on STN
AN 2003:206874 USPATFULL
TI Methods and compositions for the treatment and diagnosis of pain
disorders using 57749
IN Silos-Santiago, Inmaculada, Jamaica Plain, MA, UNITED STATES
PA Millennium Pharmaceuticals, Inc. (U.S. corporation)
PI US 2003143231 A1 20030731
AI US 2002-281868 A1 20021028 (10)
PRAI US 2001-335046P 20011031 (60)
DT Utility
FS APPLICATION
LN.CNT 2876
INCL INCLM: 424/146.100
INCLS: 514/001.000; 514/044.000; 435/006.000; 435/007.200
NCL NCLM: 424/146.100
NCLS: 514/001.000; 514/044.000; 435/006.000; 435/007.200
IC [7]
ICM: A61K039-395
ICS: A61K031-00; C12Q001-68; G01N033-53; G01N033-567; A61K048-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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